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ABSTRACT

Details of a year-long sociolinguistic study of classroom discourse are presented in this final report, with focus on pupil perceptions of the units and features of classroom discourse. Pupils in second-, third-, and fourth-grade classrooms in a lower socioeconomic, multiethnic elementary school, viewed videotapes of language arts lessons given earlier in the day. After the 4-minute tape segments, individual pupils were asked what they had heard being said. Responses, which were printed on index cards, provided data on perceived units of classroom discourse. All index cards were placed in random array, and individuals were asked to group responses which were alike. Pupil selections and reasons for grouping provided data on salient features of classroom discourse. Comparisons were made of responses over time, across settings, and in relation to ethnicity, entering reading achievement, and peer status. Time, setting, and peer status were significantly related to differences in pupil perceptions of classroom discourse units; time, setting, grade level, and reading achievement were significantly related to differences in perceptions of salient features of classroom discourse. Findings supported the concept that the social context determines participant behavior. (Author/DB)

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Final Report
Participant Perspectives of Classroom Discourse

Part I:

WHAT DID ANYBODY SAY?

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PS 012539

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ABSTRACT

This report presents details of one aspect of a year-long sociolinguistic study of participant perceptions of classroom discourse, and focuses on pupil perceptions of the units and salient features of classroom discourse. The subjects were 165 pupils in six second, third, and fourth grade classrooms in a lower socioeconomic, multiethnic elementary school located at the southern end of San Francisco Bay. Six language arts lessons were videotaped in each classroom between September and January. Each lesson was played back in 3 four-minute segments to pupils in the class, on the same day it was taught. Pupils were interviewed individually, and asked after each segment, "What did you hear anybody saying in that part of the lesson?" The response was printed on a 3 x 5 card, and the pupil was then asked, "What else did you hear anyone saying," until no more responses were forthcoming. These responses provided data on units of classroom discourse. All the 3 x 5 cards were then placed in a random array, and the pupil was asked, "Which of these things might belong together, because people were saying the same kinds of things?" Pupil selections and reasons for grouping provided data on salient features of classroom discourse.

Category systems were developed to code pupil responses to each task. Multivariate analysis and nonparametric statistics were used to identify significant patterns of responses. Comparisons were made of pupil responses over time, across settings, and in relation to pupil characteristics, including ethnicity, entering reading achievement, and peer status. Pupil perceptions were compared to teacher perceptions, and both were compared to those of an outside observer, a sociolinguistic specialist.

Time, setting, and peer status were all significantly related to differences in pupil perceptions of the units of classroom discourse. Time, setting, grade level, and reading achievement were significantly related to differences in pupil perceptions of the salient features of classroom discourse. The findings supported and extended the basic sociolinguistic concept, that the social context is the most important determinant of participants' behavior, and demonstrated the value of the method of "triangulation" of different perspectives of the same event.

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INTRODUCTION

There is a recognized need for further study of teaching as a linguistic process. Because the consequences of classroom miscommunication can be bad for children both socially and intellectually, there is particular need for research which would help children and teachers, the participants in classroom discourse, to understand each other more fully. This study contributes to that objective by concentrating on potential sources and effects of miscommunication related to the separate perspectives of pupils and teachers regarding classroom discourse.

Conceptual Framework

The basic question that sociolinguists ask is: what differences in form, content, and sequence make one sentence different from another with regard to the kind of attitude conveyed, the kind of situation it is (e.g. intimate, formal), the kind of act it is (e.g. request, command), or the kind of person who is talking (e.g. student, teacher) (Hymes, 1972). Sociolinguists identify the social context as the most powerful determinant of verbal behavior (Labov, 1970; Philips, 1972) and point out that different cultural groups have quite different sociolinguistic assumptions about how and when it is appropriate to talk to different audiences (Dumont, 1972; Boggs, 1972). It has been demonstrated that all speakers are multidialectical or multistylistic (Labov, 1970) and that each adapts his/her style of speaking to the social situation (Cazden, 1970; Blom & Gumperz, 1972). An understanding of how to use language appropriately in social situations is termed "communicative competence" (Hymes, 1972).

Sociolinguists make important distinctions between the correctness and the appropriateness of language use, and between the production and the comprehension of appropriate language (Stubbs, 1976). A major problem for speakers of non-standard dialects in interaction with speakers of standard dialects may be the mutual ignorance of each other's language (Labov, 1970). A problem of concern to some sociolinguists has been the fact that educational failure often appears

to result from sociolinguistic differences between teachers and pupils (Stubbs, 1976).

A second problem of concern, one with which most classroom researchers would agree, is that "it takes a tremendous effort to really see what is happening, rather than simply taking the (classroom) scene for granted and interpreting it in terms of conventional categories" (Stubbs, 1976). Proponents of classroom interaction analysis have dealt with this problem to some extent by having the teacher code the interaction and make his/her own interpretations (Flanders, 1970; Parsons, 1968; Morine, 1975). Ethnographic studies, sociolinguistic studies, and studies of teacher information processing have dealt with it by making a concerted effort to gather data about the participants' interpretations of the behavior, chiefly through a variety of interview techniques. Sociolinguists particularly have emphasized the need to study participant interpretations of the social situations in which language occurs.

Stubbs (1976) argues that:

> "Research on children and classrooms is usually done by outsiders, but ultimately it is only the participants in a situation who have full access to all its relevant aspects. Ultimately, a sociolinguistic description of classroom language must come to grips with the values, attitudes, and socially loaded meanings which are conveyed by the language, and only the participants have full access to these values." (pg. 76)

Taken together, these sociolinguistic concepts and findings help to define the reason for investigating participant perceptions of classroom discourse. The classroom is viewed as one social situation among several in which the child participates. It can be expected that the language appropriate to each of these different situations will vary, and that the child will have some measure of communicative competence in each of these varied situations. It is also quite probable that children from different cultural backgrounds may have different assumptions about what is appropriate linguistic behavior in a given situation. Pupils' interpretations of classroom discourse may differ from the teacher's

interpretations, and both may differ from those of an outside observer.

This study investigates participant perceptions of the nature of communication in the classroom, describes pupil conceptions of the differences between discourse in the classroom, at home, and in a play situation, examines the correspondence between pupil and teacher conceptions of classroom discourse, and compares participant conceptions to those of a sociolinguistic specialist in analysis of classroom discourse.

Investigative Questions

Four major questions addressed as part of this investigation are reported upon here, as follows:

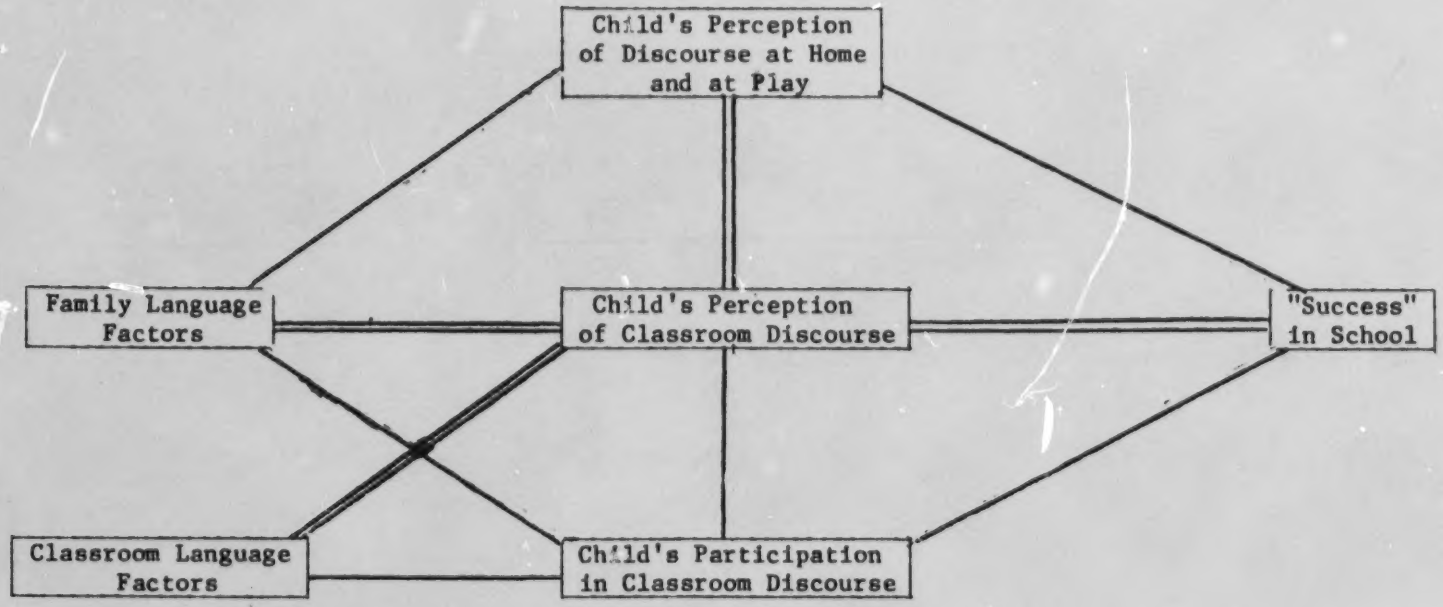
1. What do pupils conceive to be the units and salient features of classroom discourse?
   a. Do these vary by grade level or by classroom/teacher?
   b. Do these vary by cultural background, academic ability, or classroom status as perceived by classmates of the pupil?
2. Are there differences in what pupils identify as the units and salient features of classroom discourse and those of discourse at home or in play settings?
3. How closely do the units and salient features of classroom discourse conceptualized by pupils correspond to those identified by teachers themselves?
4. How do the salient features of classroom discourse as conceptualized by pupils and teachers compare or contrast with the features identified by a sociolinguistic specialist?

The general paradigm which has guided this study is presented in Figure 1. In this model the child's perceptions of discourse at home and at school and his/her participation in classroom discourse are seen as intervening variables between family language factors, or classroom language factors, and eventual success in school. The lines indicate the types of relationships we are examining in the total study. The double lines indicate the relationships to be discussed in this paper.

Each of the boxes in this model represents a set of variables. In this

FIGURE 1

A General Paradigm for Analysis of Participant Perspectives of Classroom Discourse


Child's Perception of Discourse at Home and at Play
Family Language Factors
Child's Perception of Classroom Discourse
"Success" in School
Classroom Language Factors
Child's Participation in Classroom Discourse

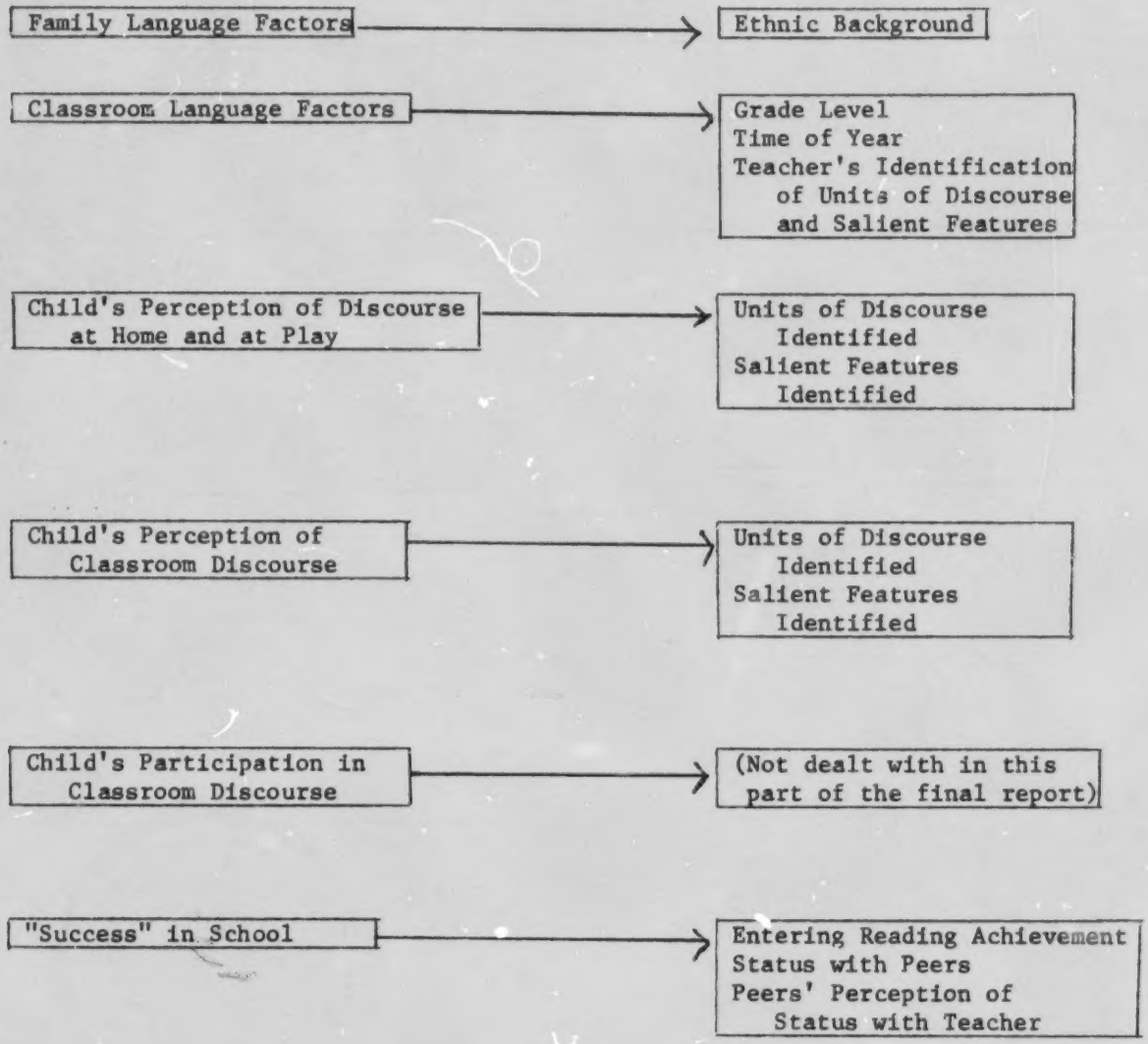
paper only the variables associated with units and salient features will be considered. Figure 2 identifies these variables in more detail. Most of these variables are self-explanatory, or will be explicated in the process of reporting on data collection procedures and findings. The variables associated with "success" in school deserve some comment at this point, however.

Much of the research on effective teaching has focused on standardized achievement in basic skills as the single criterion of success in school. Furthermore, success is typically defined in terms of "future" status in achievement of basic skills rather than status during the period that the classroom is in operation. It is the end-of-the-year test that is most often used to determine the success or failure of the individual pupil and the effectiveness of the classroom teacher. Entering achievement, which might be termed "concurrent" status, is used mainly as a means of controlling for differential pupil ability to arrive at more accurate estimates of the teacher's contribution to pupil achievement.

A sociolinguistic approach to the study of classroom interaction forces us to acknowledge the importance of concurrent status, and to give equal emphasis to achievement status and status in the social system of the classroom in which the interaction occurs. We have viewed success within the social system in terms of pupil status within the peer group, as well as pupil status with the teacher. From this perspective the highly successful pupil, in terms of concurrent status, is one who achieves well in academic areas, and is highly regarded by both the peer group and the teacher. A very unsuccessful pupil is one who is low achieving, and is also low in peer status and in status with the teacher. Of the 128 pupils in our study for whom all three types of data were available, there were only 17 pupils (13 per cent) who were "very unsuccessful," and 111 pupils (87 per cent) who experienced moderate to high status in one or more areas. Only 11 of these 111 pupils (9.9 per cent of all subjects) were "highly successful." This suggests that success in school is much more widely distributed than

FIGURE 2

Identification of Specific Variables
Considered in Analysis of Units of Discourse
and Salient Features


Family Language Factors
Ethnic Background
Classroom Language Factors
Grade Level
Time of Year
Teacher's Identification of Units of Discourse and Salient Features
Child's Perception of Discourse at Home and at Play
Units of Discourse Identified
Salient Features Identified
Child's Perception of Classroom Discourse
Units of Discourse Identified
Salient Features Identified
Child's Participation in Classroom Discourse
(Not dealt with in this part of the final report)
"Success" in School
Entering Reading Achievement
Status with Peers
Peers' Perception of Status with Teacher

we might think of we consider only final academic achievement as a criterion of success. We believe that this kind of expansion of the concept of "success" in school is essential for a clearer understanding of classroom discourse.

PROCEDURES

Subjects

The subjects of this study are 164 children, and their teachers, in six second, third, and fourth grade classrooms, in a single school located at the southern end of the San Francisco Bay. The school is located in a lower socio-economic, multiethnic, urban area, consisting mainly of small, single family dwellings. Stable, two-parent families predominate, and the school population is also remarkably stable for a lower SES community. About 45 per cent of the pupils are Mexican-American, 35 per cent are Anglo, 11 per cent Black, and 9 per cent other minority groups, including primarily children of Asian and Portuguese extraction. The six teachers are all female, and all have been teaching for many years. Four are Anglo, one is Black, and one is Portuguese.

Data Collection

Videotapes of classroom discourse. Pupils in each of the six classrooms were randomly divided into two groups (stratified by reading achievement and cultural background) to facilitate an intricate data collection schedule. A total of six lessons were videotaped in each of the six classrooms. Each taping was followed by playbacks with several small groups of pupils, and a separate playback with the teacher. The schedule of tapings and playbacks was as follows:

Round I	Sept. 1978	Tape 1 - playback with teacher and ½ class Tape 2 - playback with teacher and ½ class
Round II	Oct./Nov. 1978	Tape 3 - playback with teacher and ½ class Tape 4 - playback with teacher and ½ class
Round III	Dec./Jan. 1978/79	Tape 5 - playback with teacher and ½ class Tape 6 - playback with teacher and ½ class

Approximately 12 minutes of a classroom period were videotaped, including two to three minutes from the "opening" of the period, one or more segments in which verbal interaction occured, and two to three minutes at the end of the lesson. Teachers were asked to conduct a language arts lesson on a topic of their own choice in which there would be some kind of verbal interaction (not "seat work," a quiz, spelling, or the like).

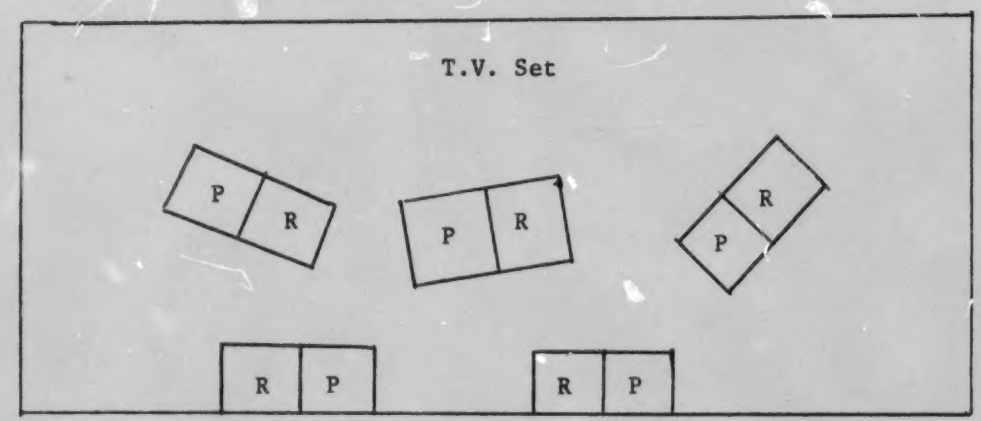
Videotaping was carried out during either the first or second hour of the school day. Students viewed playbacks during subsequent one-hour time blocks in the school's schedule. Up to five students engaged in data collection tasks during a given time block, each meeting individually with a researcher. In this manner half of a total classroom was met in one day, all within four hours of the taping in their classroom.

Videotape playbacks were conducted in the "Language Laboratory", and the children and parents when informed of the study were told that children would also be investigating language in the course of the research project. Schematically the data collection setting looked like the diagram in Figure 3.

When pupils entered the Language Laboratory the first time, they chose the researcher they wished to meet with, and sat next to him or her on a small carpet on the floor. These same pupil-researcher pairs were maintained over the course of the study. Each session began with a brief overview or explanation of the task(s) for the session, given by one of the principal investigators. Approximately three minutes of the first segment of verbal interaction in the lesson which had been recorded earlier in the classroom was then played. Each researcher then asked the pupil with whom he/she was working, "What did you hear anybody saying in that part of the lesson?" The answer was recorded verbatim on a 3 x 5 card, and the researcher then asked, "What else did you hear anybody saying in that part of the lesson?" This continued until the pupil could think of no more responses. The next tape segment was then played, and the procedure repeated, until three segments, approximately 10 - 12 minutes in total, had been viewed.

FIGURE 3

Bird's Eye Viwe of Language Laboratory



P = Pupil R = Researcher

The answers provided and recorded verbatim on the 3 x 5 cards constitute the corpus of data used in the analyses of "units of discourse" which are summarized in this report.

Following the replay of the three taped segments, the 3 x 5 cards generated by each pupil were spread in front of him/her in a random array, and each pupil was asked to make up his/her own groupings of these "units of discourse." The pupil was invited to make as many groupings as he/she wished, putting together the cards that "were alike or belong together somehow," and after each group was formed the pupil was asked why these items were put together (What was your idea here? Why do you think these go together?). The groupings made and explanations given constitute the corpus of data used in the analyses of "salient features," which are summarized in this report.

Verbatim instructions for the replay tasks for units of discourse and salient features appear in Appendix I.

Videotapes of home, play-setting, and unfamiliar classroom. During December, 1978, videotapes were made in the homes of three volunteer parents, an Anglo family, a Black family, and a Chicano family. In each home the mother identified the setting in which conversations between parents and children most typically occurred, and 30 minutes of interaction in this setting were videotaped. The videotape footage was edited into one 12-minute tape to present a variety of styles of verbal interaction in families.

Preliminary results of the Status Perception substudy were used to select a group of six pupils in each classroom (3 girls and 3 boys) two with "high", two with "middle", and two with "low" perceived peer status, and having a mix of ethnic backgrounds. Each group of six pupils was videotaped in a "play" situation in which they could do anything they wished with various construction materials provided the group. Each videotape was edited to roughly 12 minutes showing a variety of activities involving group interaction and conversation.

In order to compare pupil responses in familiar and unfamiliar classroom settings, a video recording of a totally unfamiliar teacher and class discussing very familiar subject matter (television programs they liked to watch) was played to half of the children in May, 1979. With each of these three videotapes (home, play, and unfamiliar classroom) the playback procedures used for playback of classroom lessons were repeated, and data on units of discourse and salient features were collected.

Data collection, Rounds IV - VI were conducted according to the following schedule:

Round IV	Feb./Mar. 1979	Home setting tape	Playback with all pupils
Round V	Mar./Apr. 1979	Play setting tape by classroom	Playback with all pupils
Round VI	May, 1979	Unfamiliar classroom	Playback with half of pupils

Perceived status with peers. During January, 1979, each child in the study was individually presented a series of six scenarios and asked to select the three children in his/her class most likely and least likely to fit each scenario. For example, one episode asked which children would most likely (and least likely) take charge and know what to do if there were an accident in the classroom and no adults were around. Pupils were asked to indicate their responses by pointing to randomly arranged pictures of their classmates. In four of the six scenarios the teacher was not a participant in the episode (e.g., Who do you hang around with?) while in the other two the teacher made selections of children (e.g., Who would the teacher put in charge if she had to leave the room?). The two sets of scenarios were handled separately to yield two measures of peer status: the first (PST 1) involves only children's choices of other children, while the other (PST 2) involved children's predictions of teacher choices.

For each classroom pupils were classified into "high", "middle", and "low"

perceived status, for both PST 1 and PST 2, according to patterns of how frequently their names were mentioned under "most likely" and "least likely". Appendix II details the procedures used in collecting these data and also includes a description of all six scenarios.

Ethnic background and reading achievement. For purposes of investigating relationships between perceptions of classroom discourse and ethnic background, pupils were divided into four categories: Anglo, Black, Mexican-American, and "Other" (Asian-Americans, Portuguese-Americans, American Indians, etc.). In addition, percentile scores on the reading portion of the Metropolitan Achievement Test battery administered routinely by the school in the fall of 1978 were used as "cutting points" to divide the pupils into four categories, from lowest in entering reading achievement to highest: Q_1 (below the first quartile), Q_2 (between the first and second quartile), Q_3 (between the second and third quartile), and Q_4 (above the third quartile).

UNITS OF DISCOURSE

Of interest here are the types of discourse information pupils gave in response to the question of what they heard anyone say, and the amount of linguistic or other material referenced in their answers. Of further interest is whether patterns with respect to type and amount of discourse information varied or remained constant as the school year progressed, whether patterns were the same or different for the classroom setting in contrast to non-classroom (home and play) settings, and whether classroom patterns related to the pupil variables of grade level, peer status, ethnic background, and reading achievement.

Data Analysis Procedures

All pupil answers to the question of what they heard anyone say during video replay were coded using a five category system, which was developed after initial data collection had begun, and was designed specifically to reflect the types of responses pupils gave. The major categories are:

1. Event - A report of a nonverbal event, or a verbal event in which none of the actual language used is reported;

2. Fragment - A report of a single word or brief phrase that was actually stated as part of a longer utterance;

3. Simple Unit - A report of a verbal event given in a form that closely approximates the actual utterance, but provides no information beyond the utterance;

4. Compound Unit - A report of a verbal event given in a form that closely approximates the actual utterance, and provides one additional piece of information, such as, who said it, who it was said to, what was said in response, or what nonverbal event preceded or followed it; and

5. Complex Unit - A report of a verbal event given in a form that closely approximates the actual utterance, and provides two or more additional pieces of information, such as, who said it to whom, who said it and what was said in reply, who said it and what non-verbal event preceded or followed it.

The system is described in more detail, with accompanying examples of pupil responses in Appendix III.

Repeated measures ANOVA analyses were used to investigate overall patterns among the categorized data.

General Results

In the main, pupils reported what they heard people saying in simple units of language. That is, they reported in forms closely approximating the actual utterance (a one-word sentence, a multiple-word sentence, or a multiple-sentence utterance by a single speaker), but provided no additional information. The second most frequent unit reported was compound, that is a unit that provided one additional piece of information beyond the utterance, such as who spoke, or to whom they spoke. Table 1 shows per pupil means for the various categories of units of discourse for the three classroom lessons. Table 2 compares means for classroom, family, and play settings.

Quite clearly, Tables 1 and 2 show that the pattern of predominance of simple followed by compound units is repeated over all lessons and over all three settings. The analysis of variance performed with these data produced F-values beyond the .001 level of significance for main effects among discourse unit types and for the interaction between discourse types and the five replay

TABLE 1

Types of Language Units Reported
By All Pupils Over Three Lessons
(Mean Number of Units Per Pupil)
(N=123)

	Event	Fragment	Simple	Compound	Complex
Lesson I September	.57	1.13	9.01	2.95	.92
Lesson II Mid-Fall	.49	.92	8.20	4.80	1.55
Lesson III Mid-Winter	.33	1.38	7.87	5.68	1.79
Lesson Average	.46	1.14	8.36	4.47	1.42

TABLE 2

Types of Language Units Reported
by All Pupils Over Three Settings
(Mean Number of Units Per Pupil)
(N=123)

	Event	Fragment	Simple	Compound	Complex
Lesson Average	.46	1.14	8.36	4.47	1.42
Family Conversations	2.76	1.48	5.80	4.22	1.37
Play Settings	1.60	.80	7.12	5.27	1.22
Weighted Average Over Three Settings	1.61	1.14	7.09	4.65	1.25

sessions (three classroom, one family setting, one play setting). Sheffe's contrasts show differences significant beyond the .01 level in each setting for all comparisons of simple with other categories, and for all comparisons of compound with other categories, but no significant differences for contrasts which do not include either simple or compound categories.

Table 1 shows systematic shifts from Lesson I through Lesson III in the categories of event, simple, compound, and complex. The average number of events mentioned decreases as does the average number of simple units reported. In contrast, the average number of both compound and complex units increases. Table 2 shows clear differences in the types of language units reported in different settings. For instance, events were reported more frequently in family conversations and play settings than in classroom discourse, and simple units were used less frequently in relation to family and play settings than in relation to classroom lessons. Establishing the statistical significance of these and other differences among lessons and between lessons and other settings involves complex ANOVA interaction effects when the analyses are done using the five categories of discourse units defined above. In the sections of the report immediately following, an additional system for analyzing the amount of information contained in pupil responses is described, one which results in various comparisons of interest appearing as main ANOVA effects, making the reporting of results less interspersed with complex interaction contrasts.

Additional Data Analysis Procedures

All pupil responses either stated actual language or reported either verbal or nonverbal events without stating any language. In using the additional procedures described below, separate analyses were performed for Events, and for two measures of language information, Information Load and Degree of Complexity.

The Event measure is the same as that previously described. The separate analyses using this measure can be referred to as an examination of patterns of

non-discourse responses to a discourse-recall question. Discourse Information Load for each pupil was determined by summing values for all of a pupil's responses which stated actual language, using this schedule of weights for the discourse units as defined in an earlier section:

fragment response = ½ item of information
simple response = 1 item of information
compound response = 2 items of information
complex resonse = 3 or more items of information

Degree of Complexity was computed by dividing information load by the number of answers (units of discourse reported, or number of 3 x 5 cards) given by the pupil which stated actual language.

Event, information load, and degree of complexity measures were computed for each of the five replay sessions. An average for each measure for the lesson settings was computed by summing values for all three lessons and dividing by three. An average for each measure for non-lesson settings was computed by summing values for home and play settings and dividing by two.

Further Results

Changes over time and setting. Consistent trends appear for differences over time associated with pupils' perceptions of units of classroom discourse. Systematic changes from the first to the third lesson occur for all measures used: the number of events mentioned decreases, total information load increases, and degree of complexity increases. Analysis of variance shows significant F values for information load and degree of complexity. Results are summarized in Table 3.

The systematic trends shown in Table 3 are repeated for all grade levels and all subgroups of pupils: the pattern is consistent for pupils from differing ethnic backgrounds, at all levels of peer status (both PST 1 and PST 2), and within each reading achievement level. As the year progresses and the social system of the classroom becomes better established, it appears that students include increasing amounts of social information in their responses. Pupil

TABLE 3

Summary of Means and ANOVA Values:
Units of Discourse Measures Over Lessons
(N=123)

	Time of Lesson				
	I (Sept,78)	II (Nov,78)	III (Jan,79)	ANOVA F Value	Prob. F Exceeds
Number Events Mentioned	.569	.488	.325	.70	.481
Discourse Information Load	19.16	24.06	27.22	36.50	.001
Degree of Complexity	1.45	1.69	1.82	14.33	.001

perceptions of units discourse in this setting appear to alter to include more of the social context of language as the social system of the classroom stabilizes.

One might suspect, however, that the observed shifts were due to pupil learning of the listening and reporting task used during video replay sessions. To test this out, in May, when the units of language task was thoroughly familiar to them, approximately half of the pupils in the study were shown a videotape of a lesson in an unfamiliar classroom. Table 4 presents pupils responses to the unfamiliar classroom in comparison to their responses to a slightly familiar classroom (their own in September) and a very familiar classroom (their own in mid-winter). With respect to discourse information load and degree of complexity, responses to the unfamiliar classroom were more similar to the first lesson in pupils' own classrooms in September than to the lesson in their own classrooms in mid-winter. Sheffe's contrasts for information load and degree of complexity are significant beyond the .01 level for differences between the unfamiliar classroom and the mid-winter lesson, but well below the .05 level of significance for differences between the unfamiliar classroom and the September lesson.

There are also differences in the types of language units reported in school and non-school settings (see Table 5). Considerably more events are mentioned in non-lesson than lesson settings. Further, the total amount of discourse information (information load) tends to be less in non-lesson settings, as does the average amount of information contained in answers that state actual language (degree of complexity). This latter trend is approaching statistical significance, while the others are highly significant.

Information load values depend directly on the amount of information contained in pupil responses and on the number of responses pupils give. In this particular case the average number of answers given in lesson settings (13.73) is significantly greater than the average for non-lesson settings (12.84)*.

* This difference was found to be significant beyond .01 in a Setting X Discourse interaction contrast associated with the initial analysis procedures described earlier.

TABLE 4

Summary of Means and ANOVA Values:
Units of Discourse Measures for
Familiar and Unfamiliar Classrooms
(N=48)

	Unfamiliar Classroom	Own Classroom in September	Own Classroom in Mid-Winter	ANOVA F-Value	Prob. F Exceeds
Number Events Mentioned	.35	.85	.25	3.21	.05
Discourse Information Load	19.17	20.43	28.64	13.71	.001
Degree of Complexity	1.40	1.45	2.05	12.06	.001

TABLE 5

Summary of Means and ANOVA Values:
Units of Discourse Measures for
Lesson Vs. Non-Lesson Settings
(N=123)

	Lesson	Non-Lesson	ANOVA F Value	Prob. F Exceeds
Events	.46	2.18	73.03	.001
Information Load	23.48	21.06	13.44	.001
Degree of Complexity	1.71	1.64	2.81	.09

In summary, then, pupils reported more instances of actual language used and reported fewer events in the lesson setting; their answers which stated actual language tended to include more social and contextual information (who talked, to whom, what was said in response, etc.) but not quite to a significant degree.

Differences among pupil subgroups. There are no systematic significant differences in the average number of events reported or in degree of complexity of discourse units reported for classroom lessons among pupils of varied grade levels, peer status (both PST 1 and PST 2), entering reading achievement, or ethnic background. Regarding information load, no systematic significant differences appear among pupils of varied grade levels, reading achievement, or ethnic background. One trend of interest does, however, appear in the area of information load in relation to peer status.

Table 6 shows means associated with discourse units for Peer Status 1 (PST 1). We note that there is a systematic and significant trend for information load. Sheffe's contrasts for PST 1 indicate a significant difference for Low vs. Medium and Low vs. High at $p < .001$; the contrast for Medium vs. High is significant at $p < .05$. The significant patterns for PST 1 for information load is mainly attributable to differences in the total number of answers given (units reported) by pupils at different status levels. Table 6 shows these differences to be systematic and statistically significant.

One possible explanation for the relationship between the volume of discourse answers and peer status (PST 1) is that higher status pupils were somehow more prone than others to please the researchers by providing a large number of answers during replay sessions. Data analyzed in another part of this final report (Part II: on questions and answers) suggests a different view. Peer status was found to be significantly and directly related to mention (during replay) of pupil answers given during classroom lessons, but not significantly related to mention (during replay) of teacher questions. Thus, the discourse units of higher

TABLE 6

Summary of Means and ANOVA Values:
Units of Discourse Measures by Peer Status I Categories
(N=123)

	Peer Status Categories			ANOVA	Prob. F
	Low	Middle	High	F Value	Exceeds
Number of Answers	13.46	14.10	15.10	3.353	.038
Information Load	19.51	23.83	25.97	4.11	.019
Degree of Complexity	1.45	1.69	1.72	1.302	.276

status pupils during video replay contain a higher proportion of references to pupil utterances in lessons than lower status pupils' discourse units. It seems unlikely that higher status pupils would try to please adult researchers by mentioning greater numbers of pupils' lesson utterances. More plausible is an explanation which links higher peer status to greater sensitivy to classmates and a higher general awareness of peer activity, which may contribute, in turn, to giving more responses to the question, "What did you hear anyone say?"

The situation is different for PST 2. Table 7 summarizes these analyses. The mean number of answers varies neither systematically nor significantly with status level. The same is true for degree of complexity. There is a systematic progression from low to high status for information load, but mean differences are small and the variation is not statistically significant.

The shift in results when PST 2 is examined instead of PST 1 is curious and might reflect differences in the criteria employed by children when responding to the scenarios used for determining the two peer status measures. It seems plausible that high PST 1 pupils as a group would be more "tuned in" to peer activity than high status PST 2 pupils as a group due to the fact that PST 1 designations are based on pupils' own choices among their classmates while PST 2 designations constitute pupils' predictions of other children's status with the teacher.

It may be well to note here that children's predictions of status with teacher were in fact quite accurate. A measure of pupil status with teacher was derived from teacher ratings of pupils on a variety of language characteristics. In a regression analysis where status with teacher was the dependent variable, and ethnicity, relative rank in reading, and pupil predictions of status with teacher (PST 2) were entered as independent variables, the regression was significant [$F=6.92$ (5,117), $p<.0001$, $R^2=.228$], and pupil-predicted status with teacher and relative rank in reading each contributed significantly to the explained

TABLE 7

Summary of Means and ANOVA Values:
Units of Discourse Measures by Peer Status II Categories
(N=123)

	Peer Status Categories			ANOVA	Prob. F
	Low	Middle	High	F Value	Exceeds
Number of Answers	15.31	13.75	14.66	.186	.832
Information Load	22.20	23.52	24.49	.449	.640
Degree of Complexity	1.45	1.71	1.67	1.214	.301

variance ($p < .004$ and $p < .0006$, respectively).

Summary. These findings suggest that the reporting of context information in conjunction with statements of actual language is a function of familiarity with the social setting in which the language occurs, at least in formal settings like the classroom, with more adjunct information being reported in more familiar settings. The reporting of units may also be a function of formality or informality of setting, with a considerably higher frequency of events (without stating actual language) being reported in informal settings, together with a trend (approaching statistical significance) toward the inclusion of less context information in conjunction with statements of actual language, also in informal settings. Regarding classroom settings, pupils who achieve high perceived status with their classmates give more answers stating actual language than other pupils, a possible reflection of greater awareness of peer activity.

SALIENT FEATURES

Of interest here are the patterns of focus of the groupings or categories made by students, using the 3 x 5 cards on which were recorded the language they had reported hearing after videotape replays. Which aspects of discourse did pupils tend to concentrate on in identifying common features? Did salience tend toward more concrete or more abstract features of language, or toward the social and interactive aspects of discourse? As in other portions of this report, an important question is whether patterns of salience varied or remained constant as the school year progressed, whether patterns were the same or different for the classroom setting in contrast to non-classroom settings, and whether classroom patterns related to the pupil variables of grade level, peer status, ethnic background, and entering reading achievement.

Data Analysis Procedures

A five-category system was developed, based on pupil responses to the

grouping task, and was used to classify the salient features of language that pupils identified in their explanations of why certain units of discourse (their 3 x 5 cards) "belonged together." The types of salient features are as follows:

1. Elemental - The reason given for forming a group focuses on identical letters, words, or phrases;

2. Structural - The reason given for forming a group focuses on features emphasized by the linguistic structure of English, such as, relationship of topic (subject) or action (verb), or capacity for sentence expansion;

3. Contextual - The reason given for forming a group includes reference to a segment of activity that occurred on the videotape, or to the central concept taught in a lesson;

4. Functional - The reason given for forming a group focuses on the type of comments being made, such as questions, answers, or directions; and

5. Social - The reason given for forming a group focuses on the person involved, such as the source of the comments or the referent of the comments, or refers to an interchange between two people.

The system is described in more detail, with accompanying examples of pupil responses, in Appendix IV.

The mean number of features identified per pupil for each category was computed for each replay session. These means were used to provide a preliminary overview of salience in lesson and non-lesson settings. Following the initial overview, three proportion measures were computed and used to compare types of salient features identified over time, between lesson and non-lesson settings, and in relation to the pupil variables of interest in the study.

Proportion of Written Features - for each replay session, the number of groups formed on the basis of "elemental" features, divided by the total number of groups formed. The average for lessons is the total number of groups formed on this basis for all three lessons, divided by the total number of groups formed on all bases for all three lessons.

Proportion of Embedded Features - for each replay session, the number of groups formed on the basis of "contextual" and "social" features, divided by the total number of groups formed. The average for lessons is figured in the same way as for written features.

Proportion of Abstract Features - for each replay session, the number of groups formed on the basis of "structural" and "functional" features, divided by the total number of groups formed. The average for lessons is figured in the same way as for written features.

A variety of non-parametric tests were used to assess the statistical significance of patterns found for these proportional measures.

Overall Results

Table 8 shows means for the various settings for each salient feature category. In grouping the language units that they identified, and describing the common features of those units that seemed to them to "belong together", pupils identified contextual features most frequently. That is, they referred to events or activities within which the language occurred as an important common (salient) feature of the language. Structural features were identified next more frequently. These are features emphasized by the linguistic structure of English, such as, related topics (subjects) or actions (verbs). The least common features mentioned by pupils were functional. They seldom grouped language units by type of comment (questions, directions) or purpose of speaker (telling us what to do). This pattern held over all lessons, and for the weighted average over three settings. When family and play settings are considered separately somewhat different patterns emerge for each setting.

Changes Over Time in Classrooms

Friedman's analysis of variance by ranks was used to test the significance of changes over time in relation to classroom lessons. The results are summarized in Table 9. Systematic and significant change occurs only for Embedded Features. It is important to note that this finding is consistent with shifts in time over classroom lessons for units of discourse in that both show increasing attention to the social context of discourse as the year progresses and the social system of the classroom stabilizes.

Changes Across Setting

The SIGN test was used to test the significance of differences in the types

TABLE 8

Types of Salient Features Identified
By All Pupils Over Three Settings
(mean number of features per pupil)
(N=123)

	Elemental	Structural	Contextual	Functional	Social
Lesson Average	.76	.82	1.31	.17	.28
Family Conversations	.55	1.11	.93	.12	.53
Play Settings	.58	.76	.72	.24	.89
Weighted Average Over Three Settings	.63	.90	.99	.18	.57

TABLE 9

Summary: Analysis of Variance by Ranks
for Measures of Salience Over Classroom Lessons
(N=123)

	Lesson I September	Lesson II Mid-Fall	Lesson III Mid-Winter	X^2r	Prob X^2r Exceeds
Written Features	2.09	1.97	1.94	3.59	.20
Embedded Features	1.90	2.04	2.07	6.08	.05
Abstract Features	1.93	1.96	2.11	2.06	.50

of categories made by pupils during lesson and non-lesson replay sessions. The proportion of Written, Embedded, and Abstract features for each pupil for all lesson sessions was compared to the corresponding proportion in all non-lesson sessions. If there was a difference, the direction of the difference was noted and the SIGN test applied to the resulting distribution of directional differences. Results are summarized in Table 10. The number of pupils showing a greater proportion of Written features to all features was significantly larger for lesson than non-lesson settings, indicating more focus in lessons on identical letters, words, or phrases. The number of pupils showing a greater proportion of abstract features to all features was significantly larger for non-lesson than lesson settings, indicating more non-lesson focus on features "forced" on our attention by the linguistic structure of English and on the functional aspects of language.

Peer Status

Kruskall-Wallis analysis for average ranks was used to test the significance of differences in types of salient features identified by pupils at varied peer status levels. Results are summarized in Tables 11 and 12.

There are trends for higher status pupils compared to others to form fewer categories based on written features and more categories based on abstract features. Although the associated analyses approach significane ($p < .10$) for PST 2, none of the analyses summarized in both tables is significant at $p < .05$.

Grade Level

Kruskall-Wallis analysis of variance was used to test the significance of differences among grade levels with respect to written features, embedded features, and abstract features. Results are summarized in Table 13.

Table 13 shows grade level to be related systematically and significantly to written features and abstract features, but neither systematically nor significantly to embedded features. The lower the grade level the greater the use of written features as the basis for grouping reported utterances. Conversely as grade level increases the use of abstract features increases.

TABLE 10

Summary of Results:
Salient Features, Lesson Vs. Non-Lesson
(N=123)

	Lesson > Non-Lesson	Non-Lesson > Lesson	No Difference	Z Value	Prob. Z Exceeds
Written Features	54	33	36	2.14	.032
Embedded Features	61	47	15	1.25	.211
Abstract Features	40	62	21	2.07	.038

TABLE 11

Summary of Kruskall-Wallis Analyses for Average Ranks:
Salient Features by Peer Status I
(N=123)

	Average Rank for Status Categories				
	Low (n=25)	Medium (n=72)	High (n=26)	H Value	Prob H Exceeds
Written Features	62.9	64.15	55.08	.96	.70
Embedded Features	54.76	64.38	62.77	2.30	.40
Abstract Features	61.16	60.55	67.67	2.94	.30

TABLE 12

Summary of Kruskall-Wallis Analyses for Average Ranks:
Salient Features by Peer Status II
(N=123)

	Average Rank for Status Categories				
	Low (n=22)	Medium (n=76)	High (n=25)	H Value	Prob H Exceeds
Written Features	65.16	65.96	47.06	5.21	.10
Embedded Features	54.71	64.01	62.68	2.05	.30
Abstract Features	53.27	61.59	71.21	4.67	.10

TABLE 13

Summary of Kruskall-Wallis Analyses of Variance:
Salient Features by Grade Level
(N=123)

	Average Rank for Grade Level				
	2nd (n=17)	3rd (n=69)	4th (n=37)	H Value	Prob. H Exceeds
Written Features	83.29	60.59	54.77	7.40	.05
Embedded Features	51.35	66.62	58.43	3.63	.50
Abstract	46.55	56.29	80.05	15.94	.001

Ethnicity

There is no evidence that ethnic background is significantly related to identification of written features, embedded features, and abstract features as salient in classroom discourse. The results of Kruskall-Wallis analysis appear in Table 14.

Reading Achievement

Overall rank correlations were computed for Fall, 1978 reading achievement scores and each of the three measures of salient features (written, embedded, abstract). Results appear in Table 15. Each child's scaled total score in reading on the MAT was used to determine reading achievement rank.

Table 15 shows that as reading achievement score increases, there is a weak tendency for children to make up more categories based on abstract features and fewer categories based on written features. The correlation of reading achievement and use of embedded features is quite low and not significant.

To obtain information on the potential effects of age differences on the use of written and abstract features, rank correlations between reading achievement and measures of salient features were computed separately for each grade level. The results appear in Table 16. Patterns in Table 16 do not show systematic progression from 2nd through 4th grade for either measure, an indication that the relationships show in Table 15 are not due simply to age differences.

Summary

For the data reported here it appears that the language features which are salient to children may vary somewhat as a function of the setting, with "embedded" features of a social and contextual nature becoming more prominent as the setting becomes more familiar. Further, salience may be related to whether or not the language occurs in the formal classroom setting or in other, informal settings, with concrete aspects of language (sound and visual symbol similarities) appearing to be more prominent in the classroom, and functional and structural features more prominent in other settings. There are trends indicating that children

TABLE 14

Summary of Kruskall-Wallis Analyses of Variance by Ranks: Salient Features by Ethnic Group (N=123)

	Anglo (n=49)	Black (n=15)	Mexican-American (n=50)	Other Minority (n=9)	H Value	Prob H Exceeds
Written Features	51.91	63.35	69.49	70.33	4.57	.30
Embedded Features	63.14	62.73	60.13	66.40	1.27	.80
Abstract Features	66.68	69.07	56.65	55.50	2.77	.50

TABLE 15

Rank Correlations: Reading Achievement and Measures of Salient Features (N=123)

	r_s	t	Prob t Exceeds
Written Features	-.293	3.37	.002
Embedded Features	.095	1.05	.30
Abstract Features	.256	2.91	.01

TABLE 16

Grade Level Rank Correlations: Reading Achievement and Measures of Salient Features (N=123)

			Correlation (r_s) coefficient	t value	Prob. t Exceeds
Written Features	2nd	(n=17)	-.114	.44	.50
	3rd	(n=69)	-.123	1.02	.20
	4th	(n=37)	-.118	.70	.50
Abstract Features	2nd	(n=17)	.177	1.98	.05
	3rd	(n=69)	.315	3.65	.002
	4th	(n=37)	-.163	1.82	.10

thought by their peers to have high status with the teacher may perceive written features to be less salient and abstract features to be more salient in the classroom than children thought by their peers to have low status with the teacher. Parallel trends appear in relation to reading achievement. More pronounced and significant trends show salient features in the classroom setting to be directly related to grade level, with the prominence of written features decreasing and that of abstract features increasing as we go from 2nd through 4th grade.

INTERPRETATIONS OF PUPIL PERCEPTIONS

The findings with regard to pupil perceptions of the units and salient features of classroom discourse demonstrate the importance of the social setting for the understanding of the language in that setting. Pupils perceived (reported and conceptualized) classroom language differently than language in family conversations and play group settings. Furthermore, they perceived (reported and conceptualized) classroom language differently over time, shifting as the classroom social system became well established.

The social context of classroom language (who says what to whom in connection with what event) appears to become more prominent for pupils as the classroom becomes more familiar. This is indicated by the fact that more information pertaining to the social context is reported in response to the query, "What did anybody say?" as well as by the fact that more groupings are made on the basis of "embedded" (social and contextual) features. We interpret these findings as evidence that the individual classroom is, in itself, a social system, which is established anew every year. We suggest that these findings underline the need to learn more about how this system <u>is</u> established, and what part language plays in that establishment.

The social context of language appears to be almost as prominent in informal

(home and play) settings as in the formal setting of the classroom, but other differences in perception exist. In informal settings, in response to the query, "What did you hear anybody say," pupils are much more apt to report nonverbal events, or verbal events without mentioning the actual language used. Also, in informal settings, they are more likely to group units of language on the basis of structural or functional features, in contrast to the use of embedded features in classroom settings. We interpret these findings as evidence that pupils understand that there are differences between the language of "natural" conversation and the language of lessons. In lessons, for example, it may be more important to note the specific phrasing of a comment or question. In normal conversation, it may well be the subject or topic of discussion which stands out, and needs to be attended to, while in lessons the specific instructional activity during which the language occurs may be a more useful organizing feature.

The importance of status within the social setting in relation to the understanding of language in that setting is also demonstrated by these findings. Of particular interest in this regard is the finding that pupils high in status with their peers report more instances of classroom language, and that these instances are for the most part the contributions that other pupils make in class discussions. We interpret this as evidence that one's status in the classroom social system may influence the language and/or the source that is attended to most closely. We are in the process of investigating this question in more detail.

Finally, these findings demonstrate that what is being taught (learned) may be an important factor in pupil perceptions of language. The evidence here indicates that written features of language are more prominent for lower grade pupils and lower achievers in reading, while abstract (structural and functional) features are more prominent for pupils in the higher grades and, to some extent, for higher achievers in reading. We suggest that this may be related to the fact that pupils in the early stages of learning to read are highly focused on

written features of words, as they struggle to translate graphemes into phonemes, while pupils in the upper grades are being taught to perceive language, both oral and written, in terms of its structural (e.g., sentences consist of subjects and predicates) and functional (e.g., sentences may be formed as questions, statements, or commands) features. It seems reasonable to expect that new skills and concepts, which pupils are in the process of mastering in relation to language in general, will color pupil perceptions of classroom language, and the results here suggest that this is indeed the case. Since the major function of the classroom is presumably learning of various skills and concepts, this finding too may be seen as related to the influence of the social setting on participant perceptions of language in that setting, for certainly the basic purpose for coming together in a social setting is an important aspect of that setting.

One additional point needs to be mentioned here, and this is the absence of evidence that differences in cultural background lead to differences in conceptions of classroom discourse. We suspect that this may be due to our particular school population. The school appears to us to be remarkably well integrated, with numerous friendship choices that cross cultural "lines." While most of the Mexican-American families are bilingual, (a few parents speak only Spanish), almost all of the children we worked with were quite fluent in English, and many did not understand or speak Spanish very well. There is community interest in maintaining the Mexican-American culture in the family, but parents are also clearly interested in having their children succeed in the American school culture. This is clearly a different population of Mexican-American pupils than would be found in a bilingual classroom, and it would be unreasonable to expect that these findings would be replicated in that kind of classroom setting. We believe, however, that the findings do reflect the real state of affairs for this particular school-community. The findings reported here of no significant difference related to cultural background are repeated for almost all of the investigative tasks used in this study. This matter is discussed in more detail in Part II of this

final report.

For pupils in this study, then, perceptions of language are clearly related to the social setting in which the language occurs, and characteristics of the classroom as a social setting are related to their perceptions of classroom language. We turn next to examine the perceptions of the other major participant in classroom discourse, the teacher.

TEACHER PERCEPTIONS

Each of the six classroom teachers in this study viewed all six of the language arts lessons that were videotaped in her classroom, and responded to the same data collection tasks on units of discourse and salient features as did the pupils. There were a few similarities and some interesting differences between pupil and teacher responses. These are examined in this section. No statistical tests have been made here. Only descriptive data are reported.

Units of Discourse

Comparisons of pupils and teachers. The major differences between pupil and teacher responses to the units of discourse task (What did you hear anybody saying?) are clearly displayed in Table 17. Teachers reported no fragments, whereas pupils did report some, though not many. Pupils reported mainly in simple units, while complex units were the predominant mode of reporting for teachers. It is worth noting, however, that this strong dominance of complex units for teachers was not evident until the mid-fall lessons. It is also the case that complex units are the only type that show a strong and consistent pattern of change over time for teachers (steadily increasing in frequency), while pupils showed consistent patterns of change over time for all three of the major categories (steady decrease in frequency of simple units; steady increase in frequency of compound and complex units).

When the discourse measures of information load (overall amount of informa-

TABLE 17

Types of Language Units Reported
Over Three Periods
by Teachers Compared to Pupils

	Event		Fragment		Simple		Compound		Complex	
	Ps	Ts	Ps	Ts	Ps	Ts	Ps	Ts	Ps	Ts
September Lessons	.57	1.33	1.13	0	9.01	6.25	2.95	4.67	.92	6.92
Mid-Fall Lessons	.49	.67	.92	0	8.20	3.33	4.80	4.42	1.55	7.75
Mid-Winter Lessons	.33	.50	1.38	0	7.87	4.08	5.68	5.08	1.79	11.17
Lesson Average	.46	.83	1.14	0	8.36	4.55	4.47	4.72	1.42	8.61

tion reported) and degree of complexity (amount of information compacted within each single unit of discourse) are considered, we see even more marked differences (see Table 18). Both the information load and the degree of complexity are consistently higher for teachers than for pupils. Interestingly enough, however, the steady increase over time in information load, evidenced by pupils, does not appear for teachers, whose pronounced increase does not occur until after the mid-fall lessons. There are no clear shifts over time in degree of complexity for teachers, as there are for pupils. In fact, while three teachers showed consistent increases over time, two showed consistent decreases over time, and one dipped, then rose again to an intermediate level.

At one level, the differences between teacher and pupil responses seem reasonable, simply in light of their differences in age, experience, and role. We might expect that those who are more experienced would recall and convey more information, and would report with greater complexity or density of information. We might also anticipate that in any discussion group, regardless of age or experiential differences, the person leading the discussion might report back more information and more complex information, by virtue of the greater concentration required to lead a discussion as opposed to merely participating in it. Thus, these basic differences in patterns of response are readily explainable.

At another level, these differences derive from a more subtle difference in type of response. It is the case that within each category of units of discourse, there are interesting differences in the type of response that predominates for teachers and pupils. These are presented in Figure 4. An examination of these patterns considered in conjunction with the frequency differences already discussed demonstrates that teachers tend to report in units that are organized around the question-response cycle, while pupils tend to report pupil responses in isolation from the teacher question that elicited them. This would seem to be a critical difference in the conceptualization of classroom discourse, and one that deserves to be explored further. (Participant perceptions of the solicit-

TABLE 18

Units of Discourse Measures Reported
Over Three Periods
by Teachers Compared to Pupils

	Discourse Information Load		Degree of Complexity	
	Ps	Ts	Ps	Ts
September Lessons	19.16	57.25	1.45	3.92
Mid-Fall Lessons	24.06	55.75	1.69	3.77
Mid-Winter Lessons	27.22	78.50	1.82	4.21
Lesson Average	23.48	63.83	1.71	3.97

FIGURE 4

Predominant Type of Language Reported
Within Each Major Category of Units of Discourse,
Pupils Compared to Teachers

Category	Pupil Reports	Teacher Reports
Simple Units	Pupil Response to a Teacher's Question (Question not reported)	Teacher Direction or Structuring of Lesson
Compound Units	Pupil Response to Teacher's Question, plus Source of the Response	Teacher Question, plus Pupil Response to it
Complex Units	Teacher Question and Pupil Response, plus Source of the Response	Extended Interchange, Initiated by Teacher Question, and containing multiple Pupil Responses

response-react cycle are examined in some detail in Part II of this final report).

Comparisons among teachers. Just as we might expect to find differences between the perceptions of pupils and teachers, we might reasonably assume that teachers will differ among themselves in the ways that they conceive of classroom language. And in fact, we find that for the six teachers in this study, there are some interesting differences. To begin with, there are clear and consistent differences between teachers in both information load and degree of complexity, when these measures are considered in relation to grade level taught. Table 19 presents these data for the 4 primary grade teachers (one second and 3 third grades) in comparison to the 2 fourth grade teachers. The fourth grade teachers are clearly lower in both information load and degree of complexity. This pattern holds, and is still a strong pattern, even when the lone second grade teacher is treated as "representative," and a straight grade level comparison is made.

At first glance, these differences seem inexplicable. There were no grade level differences in either of these measures for pupils. Since we attributed the pupil-teacher differences, in part, to the increased sophistication associated with age and experience, are we now forced to say that fourth grade teachers may be less sophisticated than second or third grade teachers? No, our explanation lies in the more subtle differences associated with the types of responses given.

As Table 20 indicates, both teachers E and F (the two fourth grade teachers) report more compound than complex units overall, while the other four teachers all report more complex than compound units. In other words, the frequency patterns of the two fourth grade teachers are more similar to those of pupils than to those of the other four teachers. These two teachers are also like pupils in that they frequently report pupil responses in isolation from teacher questions. In fact, for both of them, the initial response to the question,

TABLE 19

Units of Discourse Measures:
Comparison of Teachers by Grade Level Taught

	Information Load	Degree of Complexity
Primary Grade Teachers (N=4)	71.63	4.61
Intermediate Teachers (N=2)	48.33	2.55
2nd Grade Teacher (N=1)	77.50	6.59
3rd Grade Teachers (N=3)	69.67	4.03
4th Grade Teachers (N=2)	48.33	2.55

TABLE 20

Types of Language Units Reported
by Individual Teachers

	Teacher A	Teacher B	Teacher C	Teacher D	Teacher E	Teacher F
Event	1.17	.50	.17	.67	.83	1.67
Fragment	0.	0.	0.	0.	0.	0.
Simple	1.17	3.67	4.33	8.00	5.17	5.00
Compound	1.83	2.33	4.67	3.00	8.33	9.00
Complex	9.67	9.67	8.17	12.33	4.67	7.17

"What did you hear anybody saying in that part of the lesson," was always a series of compound units that included a pupil response and the source of that response. In contrast, the other four teachers tended to report the lesson language in the sequence in which it occurred, beginning with their opening structuring moves.

Another difference was that Teachers E and F typically reported "extended" interchanges that consisted of a teacher question and several different pupil responses to that question (Teacher E), or a teacher question, pupil response, teacher probe in reaction to that response, pupil response to the probe (Teacher F). Extended interchanges reported by the other teachers, especially Teachers A, B, and D, covered longer interactive sequences and frequently included small details (e.g., John raised his hand; I called on him).

One way of interpreting this is that fourth grade teachers focused more on language information relevant to the pupil understanding of the content of the lesson, while the other teachers included more of the communication (both verbal and nonverbal) associated with management of the lesson. These differences in teacher focus might be attributable to different learning emphases in the primary and intermediate grades. It is rather commonly accepted that intermediate grade teachers have a more pronounced orientation toward teaching academic content, while primary grade teachers are more oriented toward teaching basic skills and appropriate classroom behavior.

To carry this a bit further, there are differences between the responses of the two fourth grade teachers that may also be related to pupil learning. As noted earlier, both of them always began by reporting pupil responses. However, Teacher E invariably reported incorrect responses first, whether these be errors in facts given, or in grammar and pronunciation. Teacher F, on the other hand, reported correct pupil responses. This variation is particularly interesting because these two teachers also differed in the final reading achieve-

ment of their pupils. A regression analysis was performed with Fall '79 reading achievement as the dependent variable, and Fall '78 reading achievement, information load, frequency of participation in class discussion, and teacher all entered as independent variables. The overall regression was significant [$F = 28.57\ (8,98)$, $p < .0001$, $R^2 = .600$], and Fall '78 reading achievement, participation in class discussion, and teacher each contributed significantly to the explained variance. The two fourth grade teachers differed significantly from each other, with Teacher F's pupils achieving more than Teacher E's (entering reading controlled for). There are other differences between these two teachers reported elsewhere in this final report (see especially Part II), and it is probable that it is some combination of these differences that contributes to the observed differences in final reading achievement, but Teacher F's focus on correct pupil responses in contrast to Teacher E's on incorrect responses may well be an important part of that combination.

Salient Features

Teacher patterns of grouping language units to identify the salient features of classroom discourse are compared to pupil patterns in Table 21. The differences are obvious. Teachers form more groups overall, are much more apt to group on functional bases, and are less apt to group on elemental bases, than pupils. Certainly these differences are to be expected on the basis of differences in age and experience. As educated people, teachers ought to be more aware of the abstract categories of language (e.g., questions, statements), and of the purposes for which language is used (e.g., directives, praise). As experienced readers, they ought to be less attentive to the written features of oral language. Table 21, therefore, holds no surprises.

We might expect as well that teachers' conceptions of language (groupings of discourse units) would be less prone than pupils' to change over time. Certainly, with years of experience in classrooms, their organizing concepts ought to be fairly well stabilized. The data presented in Table 22, however, seem to

TABLE 21

Types of Salient Features Identified
in Classroom Lessons
by Teachers Compared to Pupils
(mean number of features per person)

	Elemental	Structural	Contextual	Functional	Social
Teachers (N=6)	.17	.69	2.64	2.56	.42
Pupils (N=123)	.76	.82	1.31	.17	.28

TABLE 22

Measures of Salience Over Time
for Teachers Compared to Pupils
(average rank)

	Written Features		Embedded Features		Abstract Features	
	Ps	Ts	Ps	Ts	Ps	Ts
September	2.09	1.17	1.90	2.17	1.93	2.67
Mid-Fall	1.97	1.17	2.04	2.25	1.96	2.58
Mid-Winter	1.94	1.00	2.07	2.50	2.11	2.50

go contrary to this expectation. Here teachers' patterns are strikingly similar to those of pupils. While there are decreases over time in use of written and abstract features as bases for grouping for both teachers and pupils, there are increases over time in use of embedded features as bases for grouping for both sets of participants.

Pupil patterns of increase in use of embedded (social and contextual) features were interpreted as demonstrating that features of the classroom social system became more salient for pupils as the social system became better established. The data presented in Table 22 suggest that this phenomenon may occur for teachers as well as pupils.

As with the units of discourse identified, there are subtle differences between pupil and teacher explanations given for both contextual and functional groupings, and these deserve some comment. For pupils, contextual groupings tended to be organized by lesson segment (e.g., things said at the beginning of the lesson) or by lesson activity (e.g., these were all said when we were writing words on the board). For teachers, contextual groupings tended to be organized by lesson concept (e.g., these were the ordinary examples of compound words that the kids gave; these were the unusual and interesting examples of compound words that they gave). For pupils, functional groupings tended to be simple, standard categories (e.g., questions, answers). For teachers, functional groupings tended to include references to instructional purpose (e.g., questions I asked to get out facts; questions I asked to get expressions of their opinion).

These examples indicate that the content and instructional purpose of the lesson were salient features for teachers that were expressed in both contextual and functional groupings, while the activities of the lesson were the salient features for pupils that were expressed in their contextual groupings. These differences in focus seem appropriate, given the different roles of the two sets of participants. It is, after all, the teacher's role to guide the discussion so that the content is covered and the instructional purpose is achieved, while

it is the pupil's role to engage in the activities designed by the teacher.

Finally, we turn to examine grade level differences in teachers' identification of salient features (see Table 23). There are no apparent differences between third and fourth grade teachers, the second grade teacher clearly stands out, particularly for use of written and embedded features. Our second grade teacher (Teacher A) was the only teacher who grouped oral language units on the basis of written features. The features she referred to were not isolated letters, as was the case for many children, but were words and phrases which were repeated in more than one of the units of discourse that she had reported.

It is the case that repetitive phrases were frequent features of the discourse in this classroom, but were absent in the other classes. For example, in reading a story, Teacher A encouraged choral reciting of the oft-repeated story phrase, "Cheese, peas, and chocolate pudding." Her lesson openings were highly ritualized, with patterned phrases, like: "Is everyone sitting up straight;" "Are your hands folded in your lap;" "Are your eyes on me;" "Then we're ready to begin." Since this form of repetition was a noticeable feature of language in this classroom, it is not unsurprising that it appears to be a salient feature for this teacher. Whether this is a pattern more apt to be associated with the lower grades is not clear here, since our subjects included only one second grade teacher. This may be worth investigating further, however, since repetitive language does tend to be more frequently featured in kindergarten, first, and second grade classrooms than in the later grades.

This same second grade teacher also differs from the other teachers in her very infrequent use of embedded features. The reader will recall that for the majority of teachers embedded features were contextual, and tended to refer to the content and instructional purpose of the lesson. Teacher A had almost no groupings that were based on lesson content or purpose. This may be related to the fact that her lessons involved little language arts content, and seemed instead to be focused on the learning of appropriate classroom behavior. (This

TABLE 23

Measures of Salience
by Grade Level Taught

	Written Features	Embedded Features	Abstract Features
2nd Grade	.19	.16	.65
3rd Grade	0.	.50	.50
4th Grade	0.	.51	.49

pattern is discussed more fully in the sociolinguist's report on language in these classrooms, which is presented in the next section).

Summary

Teacher perceptions of classroom discourse, as revealed in the tasks involving identification of units of discourse and salient features, also demonstrate the importance of the social setting for participants' perceptions of language in that setting. In particular, the typical teacher's role as leader of the instructional process which would seem to be the major purpose for communication in lessons, and the individual teacher's sense of the major goal of learning in that classroom (or at that grade level), appear to influence or shape teacher perceptions of classroom discourse.

It is clear that teachers and pupils view classroom discourse differently, though there are similarities, too. It is also clear that when the two sets of perceptions are compared, we gain new insights into each. We turn next to examine the perceptions of an outside observer, a sociolinguistic specialist (Roger Shuy, of Georgetown University and the Center for Applied Linguistics), in the belief that this third perspective of classroom discourse may clarify our understanding even more.

A SOCIOLINGUISTIC ANALYSIS

This paper is a report of the characteristics of talk as it is used in the six classrooms observed in this study. This analysis, done independently of the other parts of the research, comes from the perspective of a sociolinguist. It is divided into three parts: where the talk takes place, how the talk takes place, and what the talk means.

Where the Talk Takes Place

One must begin a sociolinguistic analysis of classroom talk by noting that

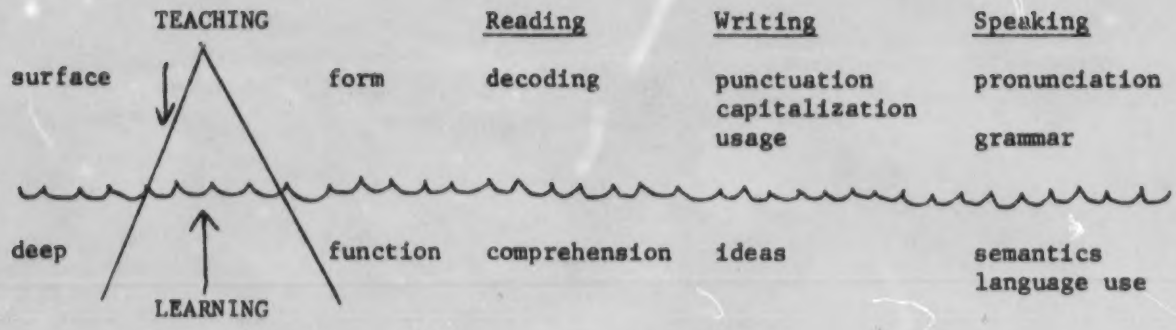
language is used for many different purposes in many different ways. Consequently, any description or interpretation of a given exchange of talk must be set in the many conceptual and physical contexts in which such talk occurs. All classrooms, for example, have multiple purposes, institutionally and individually. School, for example, is supposed to develop learning of content but it is also designed for learning acceptable social behavior. That is, the teacher's role is to further both cognitive growth and social development. These concerns are sometimes mutually supportive and, at other times, at odds with each other. In addition, while learning can only be individual (that is, someone cannot learn for someone else), our schooling system requires such learning to take place in the context of thirty or more children per teacher who are together, in the same room, the majority of the time. This rather obvious fact must be stated because it is such an important constraint on classroom talk. Perhaps the major distinction between classroom talk and other daily discourse is that the latter is most often one to one and the former is most often thirty or more to one.

It is also an unfortunate fact of education that the social function of talk is more visible than the content or cognitive function. Evidence of this is the frustration of the language arts in getting beneath the surface of learning to what linguists have referred to as the deep structure. Elsewhere, I have characterized this difference with an "iceberg illustration," here depicted in Figure 5.

Figure 5 shows, essentially, that the focus of instruction in the teaching of reading, writing, and speaking is most frequently at the surface level. We give lip service to the importance of the deep levels, the functions of these concerns, but relatively little instructional time or focus. Education is not alone in having responsibility for this situation. The general public finds it most convenient to be critical of education at the points where education can be seen--the forms. They fail to understand that learning takes place from deep to surface (the exact way babies learn their native language) rather than

FIGURE 5

Iceberg Illustration



from surface to deep.

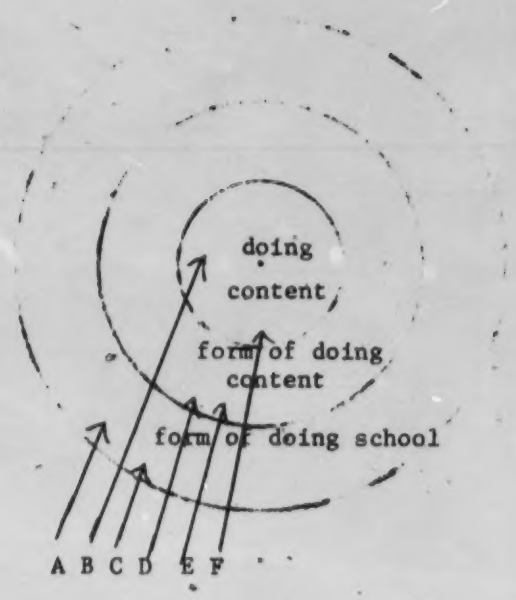
It is not surprising, then, that the teachers in this study tend to focus on the aspects of language arts which are, on the whole, surface: the socialization aspects rather than the content aspects. This is not to say that these socialization aspects are unimportant. They are most certainly the crucial delivery system of the content and the latter would not be actualized without such a delivery system. The question, rather, is one of focus and balance. It is my position that, just as it is more important to have a good idea and say it poorly than to have a poor idea and say it well, so it is more important to have a good language arts content with poor delivery than a poor or zero concept with good management and delivery. Naturally, the best of all possible worlds would find a good concept well delivered.

The six teachers in this study approach the content of the language arts lessons in somewhat different ways. It may be useful to symbolize this range from content to delivery as a set of concentric circles (see Figure 6).

When we speak of "where the talk takes place", then, it is clear from Figure 6 that the majority of talk does not take place in the content aspect of language arts. This is not to say that no content is mentioned or learned. On the other hand, very little language arts content was provided to the students in any of these twelve lessons. In the twelve lessons of Teachers B and F, for example, there are small amounts of language arts content taught--for example, the capitalization of "I". The lessons of other teachers were ostensibly about such things as antonyms but the buildups were so removed from the topic that there is little chance of any language arts content learning taking place. Teachers A and C had no language arts content at all. Teachers D and E had even less language arts content than teachers B and F. Figure 6 attempts to recognize that the classrooms of all six teachers contained a great deal of talk about "doing school" which means the social aspects of being in school such as management, directions about taking out books, being quiet, etc., (the outer circle). Four of the teachers

FIGURE 6

Representation of Form and Content:
Where the Majority of Classroom Talk Takes Place



talked about (and permitted talk about) the form of doing the content. By this I mean that there was talk about the way one would behave or talk if one were to focus on a language arts content. This sort of talk appears to be useful as a way of getting into the content or leading up to it. All thirty-six lessons studied, however, were disappointing in terms of the actual ratio of language arts content to the forms about that content or the forms of doing school.

In terms of discourse analysis, what Figure 6 represents is that teachers B, D, E and F all introduced the topics of language arts content but that only teachers B and F developed those topics to any form of resolution. By analogy to normal conversation, it is equivalent to bringing up an appropriate subject for discussion but then not taking that subject (topic) to any logical destination. In conversation, topics eventually get resolved in some way. In these classrooms, the topic of language arts is expected in all twelve lessons. It is clearly introduced in only the lessons of teachers B, D, E and F. It is resolved in even fewer of these lessons. Teachers B and F occasionally resolve a language arts topic by focusing the content of that topic and by leading the students to it. Teachers A and C expend most of their effort on the topic of school socialization, never getting around to the topic of language arts at all.

How the Talk Takes Place

Talk and management. One of the keys to good management is in knowing where we are and where we are about to go. Identification of oneself in an agenda is managed by these teachers in quite different ways. Teacher D consistently informs her class about where they are within the lesson plan, explaining as she directs the lesson. Her lessons contain clear sequence markers--openings, continuation indicators, and closings, all accomplished with language. Likewise, Teacher F uses conversational management strategies which are quite consistent across lessons. The first of these strategies is her openings of lessons, the transition point from the opening exercises to the lesson itself. Most frequently, this transition is accomplished by Teacher F as follows. Her introduction

consists of a personal anecdote topically appropriate for a discussion with almost anyone. While the content might well be suitable for any conversation, the presentation is much more reminiscent of classroom speech: pause to get everyone's attention, silence, beginning of anecdote with a very high intonation, anecdote, and completed by a leading question which offers the class an opportunity to bid for a turn to join the conversation.

Within the lesson, this teacher demonstrates a variety of mechanisms for directing the discussion. Note the following pivotal utterances which the teacher strategically places to move the lesson forward:

(1) I'd like to turn something around a minute, then, did the elk see you?

(2) Now I'm going to come back to you because you sort of triggered something in my thinking there.

(3) Well, something that Rachel said sort of ties in with a short little poem that I'd like to read to you today.

Teacher B, in contrast with Teachers D and F, uses language to manage in a different way. Her focus is on the manner of child response more than on the content of it. In all of the lessons examined for Teacher B, the lesson questions contain instructions which require that students give appropriate answers in appropriate form. At least two lessons are the "guess what's in my head" variety where children are to ask yes/no questions designed to help them discover what the teacher has in mind. One of these lessons contains the following exchange:

Student: What shape is it?

Teacher: Can you say that another way?

Student: How big is it?

Teacher: No, why don't you ask me what shape you think it is, ask me that.

Student: Is it square?

Teacher: No.

This discussion is representative of the simultaneity of language tasks that teachers encounter. Teacher B has to control for the content of the question,

which in this case is acceptable. She has work to do, however, on the form. When focusing on form, the content changes from a question of shape to one of size. Teacher B has to re-establish the content while still working on the form. Unfortunately for the student when it all comes together, the answer is still "no." Teacher B is generally skillful at these manipulations. The language teachers use most fulfills a variety of classroom needs; the interesting question of the relationships that exist between teacher language use and teaching still remains. Or, from another perspective, does the student learn the rules or does the student learn?

Teacher E manages the class in still a different way. Very strong on transition procedures--"hands down, clear desks, listen closely, etc."--she runs a tight ship in terms of the conditions for talking. Teacher E is always in control, inching forward slowly, never fully revealing the right answers and often giving only hints of them. She permits many turn-taking exchanges, offering a wide range of class participation, but very little progress toward content goal. This is a clear case of the social equality of classroom management being at odds with the probing of real knowledge. Management, for Teacher E, is done primarily by well controlled bidding (hand-raising), with short turns and little response on her part which would indicate whether or not progress toward resolution is being made. It is management by withholding information. She doles out precisely the information needed, no more and no less, and only when it is needed. This use of language allows the teacher to enforce verbally her lines of control. This is further exemplified when a student raises his hand to ask "What page [of the book]?" Teacher E answers: "I haven't told you yet", immediately followed by "Would you please open your books to page 18." Maintaining control through withholding of information is certainly not limited to the classroom; neither, however, is it uncommon in the classroom.

Teacher C sets the ground-rules of her lessons via language, but not with

clarity. She often presents the rules inductively without explicitly stating the rule itself. When Teacher C does attempt to explain the ground rules of the lesson deductively, the explanation is lengthy and unclear. The students are not always clear about what they are to do and are occasionally frustrated by this. Teacher C attempts to overcome this confusion by seeking the help of one of her better students. She uses this pupil by giving him many turns, and praising his answers ("Oh, I hadn't thought of that!"). Like many teachers, Teacher C has found a student on whom she can depend for participation and cooperation. In a sense, she has appointed an assistant manager.

Teacher A manages with ritualized language. If Teacher F is a classic example of natural language in the classroom, Teacher A provides a classic example of ritualized language use. The language used in this classroom is unlike anything heard by children in the other contexts of life. It is as though the teacher has decreed a special language domain to be used in that classroom to the exclusion of all others. The students in her class, by the time we see them, manage this language rather effectively, all things considered. From the perspective of education, it is difficult (if not impossible) to determine what (if anything) is ever learned. The language arts are defined almost entirely as social etiquette, ritualized choral behavior, and "getting ready" for something. Perhaps there is a kind of "following directions" learning which is remotely associated with comprehending oral instruction, but the price the children pay to learn it is quite great.

Almost as though ritualization of talk were not enough, Teacher A also manages with her hands. She actually conducts the class much as an orchestra conductor conducts an orchestra. She uses her hands to sit the class down, to conduct counting functions and, of course, to lead the singing of "America". With her hands (virtually the only movement she makes) she quiets, elicits, and moves.

These six teachers, then, use language to manage in a range of ways. Since

the conditions of good management never operate in isolation from what is being managed, it is difficult to assess the quality of such effort on any basis but clarity. Teacher A, for example, manages very strongly but produces a soporific effect. Teacher F manages with natural language (conversational) strategies. Teacher D marks the lesson points most effectively in a metacognitive manner. Teacher B manages toward getting the form of school and the form of content right (and also covers content in her lessons). For Teacher C, classroom language follows rigid turn-allocation (non-language) rules. Teacher E manages by controlling and withholding information.

Topic. Topic introduction, branching, maintenance, recycling and resolution are of great interest in any verbal exchange. Only recently has such work been seen to be of interest in education, and the lessons examined here offer hints of different teaching styles.

Teacher F, for example, is adept at topic branching. This term can be used to refer to pivotal points in the discussion when the answer to the question "What is being talked about?" changes. While theoretically any utterance of any participant in a conversation can serve to alter the topic, classroom language has certain characteristics that constrain this generalization. Most obvious is the role of the teacher as discourse director, the person whose responsibility it is to steer the verbal interaction so as to attain the goals of schooling. In order to achieve those goals, topics which appear peripheral are more often student-introduced and teacher-truncated than those which immediately relate to lesson topics, which are teacher-introduced and class-developed.

The poem, "Accidentally," presents Teacher F's class with the rather common assignment of linking their own experiences to that which has been presented. The open-ended instructions: "What I'm going to ask you to do is think of an experience you've had that's similar to the poem, that you might like to share with us..." lead the students to literal associations via the word "swallow". The conver-

sation develops the notion of accidentally swallowing something until teacher asks the question: "How'd you feel if you swallowed a bug, and you swallowed dirt or dust, and you want to tell somebody about it, what would you be feeling?" A student answers that people might laugh. Teacher F evaluates the response by rephrasing: "You'd be a little bit embarrassed." Building on this evaluative paraphrase, Teacher F branches the topic and develops the lesson in another direction: "Can you think of anything else that has happened to you, not--besides swallowing--where you felt embarrassed..." In contrast to the student controlled branching in the first instance, this case illustrates this discourse mechanism as the teacher might use it. This initiative is a successful one leading to several "embarrassed moment" stories; further on, there is a teacher turn which resembles in some ways a potential topic branch. "Is there anybody in here who has never been embarrassed?" Students unanimously reject this opening move by predictably answering no.

One of the main features of Teacher F's teaching style is the fluidity of her lessons. She seems to be very attentive to a need for topics to flow smoothly from one to the next. Teacher F responds to student comments in a way which builds on what the student has contributed while at the same time allowing herself to design precisely where the topic will go.

In sharp contrast is Teacher A's class, in which the students have such insecurity about what a "safe" topic is that they recycle old "safe" topics even after Teacher A has signaled a topic change. During sharing time in her class, for example the following topic cycles occur: lunch money, B-B guns, snow, Thanksgiving. Even after Teacher A signals change of topic, there is a common return to the topic, used by a conversational predecessor, which has been declared safe and acceptable. The B-B gun topic recurs, for example, after it has been declared ended. Once the B-B gun topic is exhausted, snow becomes the recurring subject and finally one girl returns all the way to the introductory classroom business and declares that she has also forgotten her lunch money.

When the topic is once again shifted to Thanksgiving, the snow topic is recycled near the end of the tape (see Figure 7).

What are we to learn from this? It appears that in such a highly regulated classroom, even the topic of conversation in sharing time is thought to be restricted. Children who are so closely managed appear to be insecure about establishing even a new topic, so they cycle back on older safeness, to avoid error making. Teacher A's stress on ritual actually serves to eliminate original topic introduction on the part of students, whose efforts to suggest applications or to extend the topic are summarily dismissed or ignored. The more this rituality is encouraged, the more the students resort to safe topics. By creating such an atmosphere, the class becomes topicless. Since Teacher A has no particular topics herself and permits the students to have none, the class becomes a sleepwalk of ritual movement and incantation.

Teachers B, D and E fall somewhere between the extremes of Teachers F and A. Their topics are introduced, maintained, and switched almost invariably by the teacher. Teacher E has iron-fisted control, while Teachers B and D are at least amenable to suggestion. Teacher C runs into trouble with her lack of clarity of topic introduction and maintenance. In fact, her topic shifting is probably one of her weakest characteristics as a teacher.

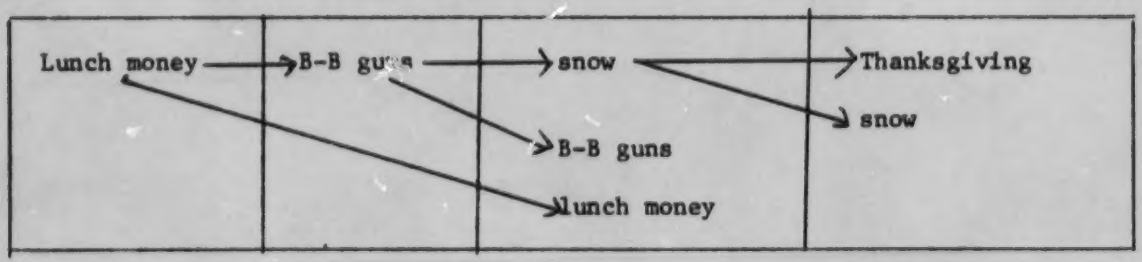
Self-referencing. Identification of self is another interesting aspect of teacher talk in our sample. A consistent feature of Teacher B's language is her use of third person reference forms (pronouns or proper nouns) to refer to herself. For example:

Teacher B: I have a good one. Mrs. B. is thinking about a teacher at X School. And I want you to ask me some ....

In this instance, the teacher begins by referring to herself in the first person, switches immediately to her name and back again to the first person. Pronominal reference again changes, this time to the first person plural:

FIGURE 7

Topic Cycles



Teacher B: No. What do we know so far about this animal?

What color isn't it? What do we know so far?

While it is rare outside of classroom discourse to hear someone use other than the first person singular for self-reference, this teacher's shifting from one form to another may well correspond to what portion of the lesson is happening. It appears that opening portions of her lessons are more likely to have proper noun self-reference while summation/evaluation points in the lesson may be marked by the "we" usage.

Likewise, Teacher D also relies heavily on reference forms, both as openers ("Boys and girls, we're going to ...") and as separating social indicators. References to herself as "Miss D" solidify the social distance between her and her pupils. It appears that her rather open and emotional style of teaching causes her to need some device for putting the brakes on total informality. She seems to have chosen this device as a way of checking what might well lead to over-informality.

Teachers A, C, E, and F, on the other hand, do not make use of this self-referencing strategy to frame the lesson as Teacher B does, or to provide social braking, as with Teacher D.

Supersegmentals. The study of the supersegmentals of language--intonation, pitch, stress, juncture, and pace--has been largely ignored in classroom interaction. Yet the teachers in this study make use of such language features in different and interesting ways. To study supersegmentals, however, one needs a base of comparison: what do these features of intonation, pace, etc. compare with? The pace and intonation of lesson talk can be compared with that of natural conversation. Teacher B makes use of supersegmentals as follows: at the start of her lesson, her pace is slow and deliberate and the intonation and stress very teacher/lesson oriented. At one point, however, these features, as well as a decrease in volume, switch into parameters more descriptive of natural conversation. What signals the change is an interruption of the lesson focus

to a management task. Among the reasons possible to speculate is the immediacy of the teacher's need for help at that moment; the students at that table can help her set up for the next lesson round by moving the blocks into the starting position. The utterance that follows slips back into characteristics of lesson talk as the teacher begins the next round with "special instructions". The juxtaposition of these sequential utterances within one teacher turn is hopefully illustrative of some of the distinctions discernible when talk and its task are co-observed.

For Teacher B, the intonational variation between lesson language and that of announcements is noteworthy. There exists an interplay of pace, intonation, and topic that seems to covary in the following manner. As the pace slows down and the intonational range increases, it is likely that the language is concerned more with the instructional segment than with the opening exercises. Within the instructional part itself, the pace seems slowest and the intonation highest during the explanation phases and least distinctive during the round-robin-like questioning.

In Teacher B's classroom intonation correlates with topic, activity, participants, and other situational features. This teacher demonstrates a wide range of intonational and stress patterns that she consistently uses to achieve certain desired effects. In fact, her use of language in general is interesting to look at if only to confirm certain aspects of what has come to be called "teacherese". Thus she uses intonation both to identify her role as teacher from her role as helper or friend, as well as to set off parts of her lesson.

Teacher D also uses intonation for role marking. Prior to the beginning of one lesson, Teacher D says the following: "Does anyone-be very careful of the microphone--does anyone have a new practice..." The part of the utterance arbitrarily set off by the dashes is perceptively lower in volume and intonation and more rapid than the rest of the sentence. This is evidence of a language strategy that might be referred to as "intonational slotting", when one utterance

is embedded in another, the two seemingly unrelated topically except in terms of their co-occurrence. This is obviously by no means a complete characterization; it is, however, an interesting research topic both linguistically and educationally. Among the features that are significant are the places within an utterance where the embedding does (or can) take place, the portions of the initial utterance that are repeated immediately after the embedding, and the semantic connections possible between the two parts. Questions about the possible different intended audiences for the utterances, the comprehensibility of these slotting strategies to young or non-native speakers, and the functions accomplished by slotting information as opposed to constructing two separate utterances are also significant in Teacher D's style.

A similar effect is accomplished by Teacher F who, on one occasion, utilizes the pause to great effect. Many possible explanations could be constructed to specify why a speaker pauses when talking: to clear her throat, to wait for noise to subside, to gather her thoughts, and so on. In this particular case, the reasons for the pause could be any of the above or some combination of these and others. The functional role that this pause plays is, however, less speculative. The class focuses more attention on the teacher in anticipation of her next move. This is a discourse environment ripe for the introduction of a new topic and the transition into a new lesson. After the pause teacher says: "I was sort of curious the other day when we were working with, talking about words and language, I was sort of curious with the fact that most of you, when you talked, put phrases together." At the onset of this statement, the teacher's voice pitch is markedly higher than usual and her intonational pattern is more emphatic. Although there are no vocative attention getters (boys and girls) and none of the other lexical items indicative of topic switch (O.K., all right, well), the pause plus intonational rise sequence appear to function similarly to announce a beginning.

Teachers C and E also make use of some intonation as sequence markers.

Teacher E tends to lack the intonational emphasis that normally accompanies openings, partly because of her desire to underscore the request for quietness. There is, however, also a controlling pace she uses to dole out information when needed to her students. Likewise, on one occasion, Teacher C observes, "I'd like for you to think for a few seconds--put your gum in the trash can--I'd like for you to think for a few seconds about..." Here, the slotted portion between the dashes definitely has a different addressee than the utterance meant for the whole class. The "gum" portion is more rapid, quieter, and of lower intonation than the utterance surrounding it. The interrupted statement is completely repeated after the slotted information. This total recycle contrasts with the second example: "How can something be--(PUPIL'S NAME), you'll ... that means do this--be both broken and round?" In this example, only the word 'be' is repeated. The addressee is stated so that it is clear that the statement is not intended for the whole group. The other characteristics mentioned previously for intonational slotting hold true.

Once again, it is Teacher A whose use of supersegmentals contrasts most sharply with the other five teachers. In her classes, whatever expectations the students may have developed about education are lulled to nothingness by a deadly slow pace. She remains seated throughout all classes, asking uninteresting questions which have little or no continuity or content, in a deadening monotone.

Naturalness. It is very difficult to segment any of the categories in this section from their occurrence in other categories. Naturalness of talk underlies questions, management, topic cycling, self-referencing and supersegmentals. It is clear, however, that Teacher F comes closest to making use of natural conversational style in her classroom. Rather than using the more animated and widely ranging intonation that is associated with teacher/lesson talk, Teacher F is more conversational. Intonational slotting is less evident. She shifts primarily when she reads to the class. But this switch is predictable for anyone who is reading aloud, particularly given the stylized format of verse. Her questions

are naturalistic. Her management by language is real, not contrived. Topics are introduced, recycled, and switched as they would be in normal conversation. Control is sacrificed to a quality which is difficult to label but which might be called the equality of friendship.

Slightly less natural in intonation and other supersegmentals is Teacher D. But Teacher D makes good use of other natural conversational devices and strategies. For example, Teacher D makes use of a conversational technique called "one-upping" as follows:

P_1: "This red ball ... was chasing somebody."

P_2: "I seen this three headed red snake."

P_3: "I saw a red horse running around 'cause a cowboy was chasing him."

P_4: "I seen this guy carrying a red rectangle and there was blood coming off of it."

The one-upping development permitted and encouraged by Teacher D is a natural conversational strategy, heard at adult cocktail parties, for example. By developing or encouraging it in this way, Teacher D is actually (but it is not sure that it is intentional) developing a useful language function. The model looks something like this:

(Topic = red)

P_1: prosaic example plus vague, general reference;

P_2: more unusual example;

P_3: more exciting example plus causative plus action;

P_4: odd example plus shocking resultative.

In doing this, Teacher D encourages highly specific and descriptive language use in her students, possibly as much by her dramatic verbal behavior as by her official requests for it. Unlike Teacher A, who restricts language use by containing creativity and eliminating topic from her teaching (thus providing nothing to talk about), Teacher D elicits specificity and description through her own language use. Likewise, Teacher D's pre-lesson activities are distinctive in

that conversation proceeds in ways which do more closely resemble "natural" conversation than school talk. Teacher D asks about old or new business and students introduce topics of interest to them (e.g., the "Haunted House," a P.T.A.-sponsored Halloween attraction). Characteristically, school talk is notable for the role the teacher plays as possessor of all knowledge, controller of each turn, introducer of every topic. In Teacher D's pre-lesson activities the conversation develops such that children ask and answer their own questions, seemingly informing the teacher as well as each other. This can be seen in contrast to the more typical teacher queries, known-information questions, which are used to test/check students' comprehension and knowledge. The use of repetition also points to a more natural conversation, with the teacher requesting repeats for purposes of getting information, as opposed to the more didactic functions of repetition.

With Teacher C, we see a somewhat different type and degree of naturalness of talk. Although it is sometimes possible to get an overall impression of a relaxed, naturalistic lesson, it appears, from other analyses of her classroom, that this naturalness actually stems from an as yet undeveloped ability to do "teacher talk" effectively. Whereas Teachers F and D appear to have passed through the desire to talk like teachers and to have risen above it, Teacher C seems to be still in an early developmental stage of acquiring teacher talk and, for this reason, she seems to be more natural.

Teachers B and E provide the best examples of the special language of classroom teacherese. They are masters of the special intonation, the set teacher phrases for management, the self-referencing, and the form-over-function trap. Teacher A is the extreme polarity of stereotyped language in teaching. Her language goes beyond teacher talk to a ritualized stereotype of it. If slow pace is thought to be good, even slower is better. If freedom is bad, total anarchy is her answer.

Whereas Teacher F is personal (adding her own experience to the conversation) and natural, the others are more guarded and aloof. The role of teacher dominates

in the minds of all but Teacher F and, to a more limited extent, Teachers D and B.

What the Talk Means

Talk in the classroom is the major device for assisting in learning. Books are helpful, and so are audio-visual aids, but the way a teacher talks can, as Robert Frost observed, make all the difference. Children come to school from an environment in which talk is conversational. They meet a new kind of language use which requires them to learn new rules. They have to learn that one cannot talk at will without making a bid for a turn (visual or verbal). They need to learn a new set of asymetrical interruption rules. They need to learn the subtleties of indirect language use. ("I see someone whose hands aren't folded" actually is an imperative, even though it has the form of an observation). The learning pattern may be described as follows:

Home conversation ⟶ School talk

With such a developmental pattern clearly evident, it would seem reasonable that effective classroom language would attempt to move in the learner's direction rather than to expect the learners to be immediately proficient in a language system they have not yet mastered. Such a strategy would look like this

Home language ⟶ School talk

That is, the effective teacher would attempt to reduce the mismatch of school and home talk styles by:

1) eliminating the unnecessary characteristics of school talk;

2) accepting the errors in stylistic conflict caused by the mismatch; and

3) setting a reasonable and gradual pace for acquiring those aspects of school talk which are necessary to be learned.

Some of the traps into which teachers can fall are:

1) valuing the need to control (and using language to gain this control) over the need to learn;

2) setting individual learning beneath group socializing;

3) emphasizing managing (through talk) over the learning of content;

4) failing to take advantage of the students' natural developmental learning by not permitting them to talk, by ignoring what they talk about, and by not capitalizing on what they do say and then steering that talk toward the content topic; and

5) failing to build on the natural conversational style with which children are familiar.

The sociolinguistic analysis of talk used in management, topic manipulation, self-referencing, supersegmentals and naturalness, as discussed in this report, all provide aspects by which these traps can be seen. Some teachers do better than others at addressing or avoiding these traps. These problems are not essentially language problems; they are teaching/learning issues. But by studying the language used, we can see more clearly some aspects of what is actually going on.

Something positive can be said about the use of language in the classroom by all six of these teachers, even Teacher A. This report is not meant to be evaluative, although it certainly delved into this territory whether it intended to or not. What it should point out is that there are many dimensions to talk in the classroom, and that not all teachers work in the same way. If the six teachers studied here provide any sort of microcosm of a larger universe, it is abundantly clear that any assessment of teacher competence in using language is highly ecological rather than segmental. To isolate any one language feature from the overall task and from other language features is not possible in the usual quantitative paradigm. To say that ritualized language is bad, per se, is not possible, since such language does accomplish certain desirable goals. That a natural conversational style is more effective seems intuitively right, but it may well not be right for every child or for every occasion. What is offered here is, instead, only a set of dimensions for analyzing the use of talk in the classroom, illustrated by a set of samples of six teachers in one school.

COMPARING PERSPECTIVES

This study was undertaken in an attempt to gain a fresh perspective of classroom discourse by learning more about the perceptions of the participants in that discourse (i.e., the pupils and the teachers), and by comparing these perceptions to those of an outside observer. We believe that the findings reported here do indeed contribute to a fresh perspective, and we will briefly highlight the elements of that perspective in this concluding section.

Comparisons Between Participants and Across Settings

First, to regain a perspective of the study as a whole, we reconstruct the paradigm that has guided the analysis. Figure 7 displays the variables and relationships that are being examined in the overall design. The dotted lines indicate relationships that have not been discussed in this portion of the final report. The single lines indicate relationships that have been examined, but found to be statistically non-significant. The double lines represent relationships that were found to be statistically significant.

To reiterate these significant relationships, the classroom language factors of time of year, grade level, and teacher perceptions of classroom discourse were all related to pupil perceptions of classroom discourse, in the following ways:

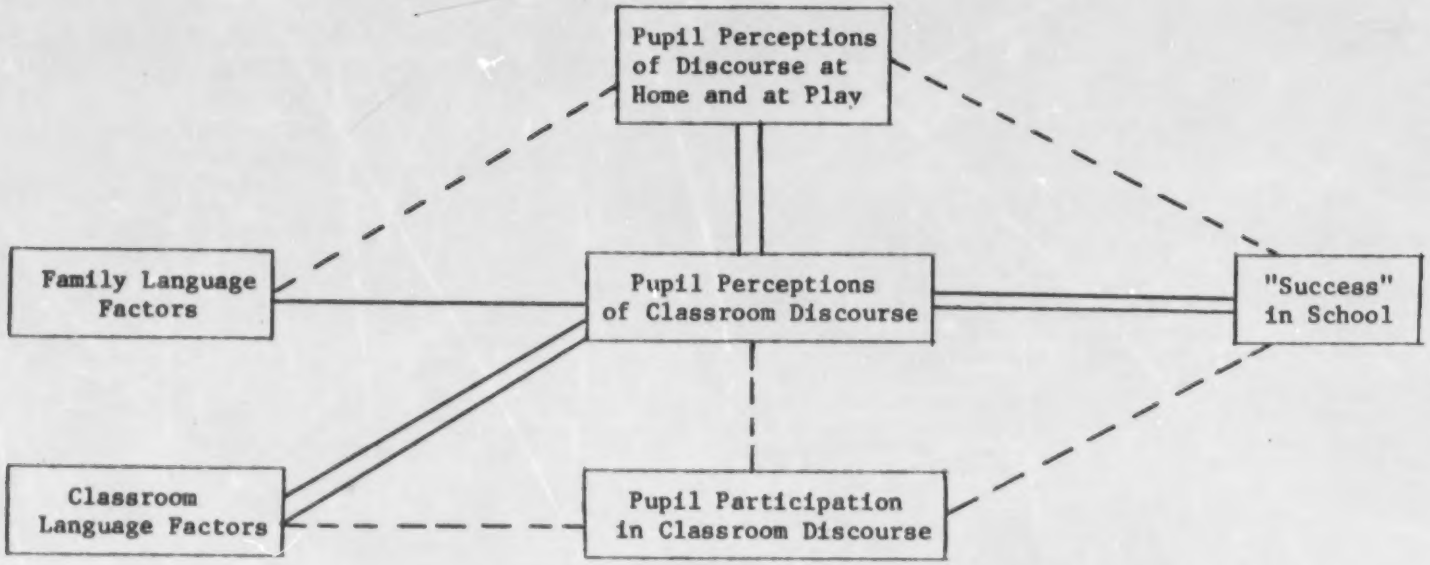
1) there was a change over time in pupil attention to the social context of classroom language, with references to social context increasing as the classroom social system became more familiar and better established;

2) there were grade level differences in pupil identification of salient features of classroom discourse that appeared to be related to the aspects of language that were being taught (learned) at those grade levels;

3) there were basic similarities between teacher and pupil perceptions, particularly with regard to shifts over time in attention to social context, and grade level differences between teachers with regard to attention to certain aspects of classroom language, that would appear to be related to emphasis on content being taught; and

FIGURE 7

Relationships Identified Among Variables


Pupil Perceptions of Discourse at Home and at Play
Family Language Factors
Pupil Perceptions of Classroom Discourse
"Success" in School
Classroom Language Factors
Pupil Participation in Classroom Discourse

4) there were basic differences between teacher and pupil perceptions of classroom language (in amount and complexity of information reported, in amount of attention to teacher questions, and in focus on content and instructional purpose vs. instructional activity) that would seem to be related to their role differences.

Pupil perceptions of classroom discourse were related to their perceptions of discourse in informal settings, and to their success in school, in the following ways:

1) the social context of language was prominent in both types of settings;

2) in informal settings pupils reported less information, reported events without use of actual language more often, and organized language on the basis of structural and functional aspects more frequently than in the formal setting of the classroom: and

3) pupils who attained high status with their peers reported more information in lessons, mainly in the form of the responses of other pupils.

These comparisons of pupil and teacher perceptions, and of pupil perceptions across different settings all suggest that, in addition to determining participants' behavior, as Labov has asserted (1970), the social context is an important factor in the formation of participants' perceptions. In particular, the role/status of the participants in the social setting, the stage of development in establishment of the social system itself, and the purpose for which the social system has been established, all appear to be contributing to differences in perception of classroom discourse for the pupils and teachers in this study. Furthermore, it is clear that pupil perceptions of language shift as the social context changes from the formal setting of the classroom to the informal settings of conversations in families and play groups.

None of this will come as a surprise to sociolinguists, although it is our understanding that participant perceptions of classroom language have never been investigated in quite this way before (Cazden, 1979). Educators, we suspect, will be most interested in the evidence presented here to the effect that the classroom as a social system is established anew each year, and that the development of this social system can be observed in both pupil and teacher perceptions

of classroom language. Earlier we noted that these findings underline the need to learn more about how this system is established, and what part language plays in that establishment. Roger Shuy's analysis of these lessons focuses on the language used by teachers as a fundamental factor in the social system of the classroom, and emphasizes the ways in which classroom differences are created by subtle differences in teacher use of language. We turn now to compare our sociolinguist's perspective of classroom language to the perspectives of the participants themselves.

Comparisons Between the Outsider and the Insiders

We are more than a little intrigued by some of the similarities between comments on the language patterns of individual teachers, and the perceptions exhibited by the teachers in their responses to the tasks on units of discourse and salient features. Two examples of this come quickly to mind.

Shuy notes for Teacher D that: she "consistently informs her class about where they are in the lesson plan;" her lessons "contain clear sequence markers;" and she exhibits "dramatic verbal behavior." Teacher D was remarkable among all other teachers in this study in the way she approached the units of discourse task. She reported verbal events in the exact sequence in which they occurred, and she tried valiantly to recall everything that had been said. This was carried to such an extreme that, on occasions when she belatedly remembered something that had been left out in her report of a segment of interaction, she insisted that it be written down at the point at which it occurred, rather than being entered on a separate 3 x 5 card (the procedure called for in our design of the study). Thus, what she produced was, in effect, a fairly accurate script of the entire lesson. We must speculate that Teacher D sees a lesson primarily in terms of its sequential movement, is very clear herself at any point just where she is in that sequence, and, because this is such an important characteristic of the lesson for her, communicates this to her pupils clearly and consistently.

A flight of fancy impels us to wonder also about the relationship between her dramatic verbal behavior (in fact, she is very dramatic in both word and gesture, and this is apparent even when she is not being videotaped) and her vision of the lesson as a script, but we carefully refrain from drawing any conclusions here.

Teacher A provides a sharp contrast to Teacher D. Shuy notes that she manages the lesson with "ritualized language" and also comments on the lack of content in her lessons, suggesting that her lessons all focus on "doing school." In her responses to the salient features task Teacher A was the only teacher of the six to base groupings on elemental features. She formed a total of six groups (over three different lessons) on the basis of repetitive phrases, reflecting the ritualized language of her classroom. In addition, she formed almost no groupings based on lesson content or instructional purpose, a pattern which also made her unique among all six teachers, and which seemed to reflect the lack of content in her lessons.

These two noteworthy examples provide evidence for the belief that behavior and perceptions are inextricably entwined. They also demonstrate how the juxtaposition of perspectives of the participant and the outside observer can highlight certain aspects of each, and create a more comprehensive perception than either can provide alone.

A more global comparison of the perceptions of participants and outside observers can be made with reference to the language features which appeared to be most salient to each. It is important to note that the tasks given the participants were rather different than the "task" given the sociolinguist, who was given rather free rein to "do a sociolinguistic analysis of these lessons." Still, we believe that the differences which emerged here are rather revealing.

The two important differences (from our perspective) between pupil and teacher perceptions of the salient features of classroom language have been noted previous-

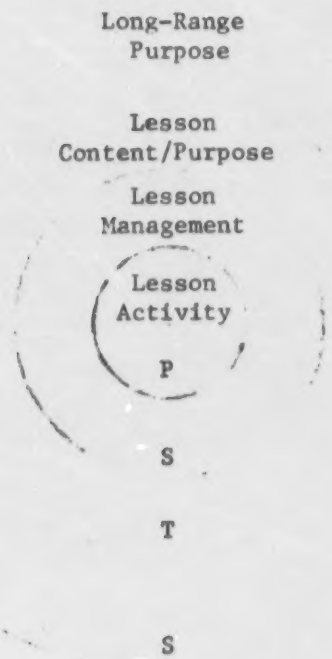
ly. They are: 1) pupils' tendency to group language units on the basis of the instructional activity in which the language was embedded, in contrast to teachers' tendency to group them on the basis of the content and purpose of the lesson in which the language occurred: and 2) pupils' tendency to report pupil comments in isolation from teacher questions, in contrast to teachers' tendency to report a "question cycle" consisting of, at a minimum, a question and a response to that question. In each case our sociolinguist perceives classroom language differently from either of the two groups of participants.

Shuy neither reported what he "heard anyone saying," nor "grouped" language units on the basis of their similar features, but he has used categories or concepts to talk about the language features that stood out for him. We submit his report as evidence that, while he identifies a variety of "salient features" (e.g., topic manipulation, self-referencing, supersegmentals), what is most salient for him is the ways in which these features of classroom talk contribute to or detract from the immediate function (managing the flow of talk) and the long-range function (learning) of the classroom. It also seems apparent to us from his report that he "hears" more teacher talk than pupil talk. The instances of pupil talk that are presented in his report are there primarily to illustrate the ways in which teacher talk serves to manage or control the flow of pupil talk.

These differences in perspective are presented graphically in Figures 8 and 9. Figure 8 can be interpreted as follows: ideally, any lesson is designed to serve some long-range goal or purpose; at the same time the lesson has a content and purpose of its own; this content or purpose determines the management procedures appropriate to the lesson; the management, in turn, is designed to facilitate the activities which occur within the lesson. The findings of this study suggest that pupil perceptions of language are organized by the "inner circle," the lesson activities. Teacher perceptions are organized from a broader or more encompassing perspective, by the content and purpose of the lesson.

FIGURE 8

Factors that Organize Perceptions
of Classroom Language



P = Pupils
T = Teachers
S = Sociolinguist

The sociolinguist perceives classroom language from two perspectives, one more narrow (management of the flow of talk), and one more broad (long-range purpose). In a sense, then, his perspective is at once more encompassing and more penetrating than the teacher's perspective, and indeed, this is what we should expect from an outside observer, just as we should expect the teacher's perspective to be more encompassing than the pupil's. Considered as a whole, Figure 8 illustrates the point that the fullest understanding of classroom language can only be achieved by the inclusion of all of these perspectives.

Figure 9 illustrates three perspectives of the saliency of the two main sources of classroom talk. For the pupil, pupil talk predominates (this is examined in more detail in Part II of this final report) and there is no clear relationship between teacher talk and pupil talk. For the teacher, both teacher talk and pupil talk are salient, with pupil talk having a slight edge, and there is a reciprocal relation between the two. For the sociolinguist, teacher talk predominates, and functions primarily to manipulate or direct pupil talk. Here, it seems to us, the teacher's view is the broadest, or most encompassing of the three, but it is still the case that all three perspectives must be combined to provide a really complete view of classroom language.

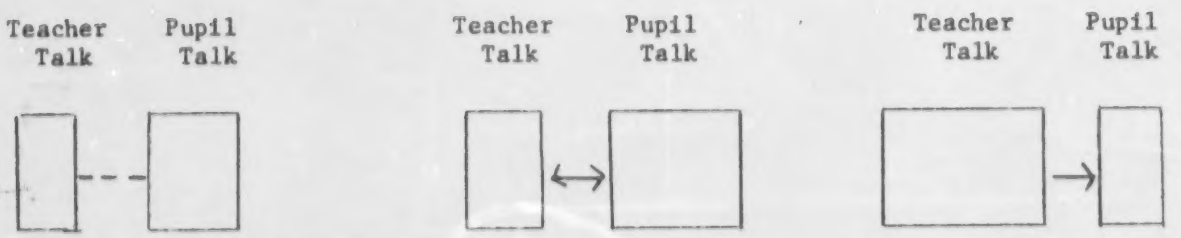
Comparisons Between the Outside Observer and Objective Tests

As our sociolinguistic expert has himself noted, his report on the language in these six classrooms is frequently framed in very evaluative terms. Since his observations and evaluations of these teachers were based only on videotapes of six language arts lessons, a very small slice of the total verbal interaction in any classroom, given the length of the school year, we compare them here to another sort of observation/evaluation - the results of standardized tests in reading achievement.

As noted earlier, a regression analysis showed that there were classroom differences in final reading achievement, when entering reading achievement was controlled for. There was a significant difference between Teacher E and Teacher

FIGURE 9

Salient Sources of Classroom Language



The Pupil's View

The Teacher's View

The Sociolinguist's View

F, with Teacher F's pupils scoring higher. Shuy has contrasted these two teachers in a variety of ways, and we summarize those contrasts here (see Figure 10), noting as we do that his initial reports on these teachers were submitted to us in the summer of '79, while final reading achievement scores (Fall '79) were not available from the school until December. Thus, Shuy's analyses were not colored by knowledge of the measured effectiveness of these two teachers. The differences in his descriptions of the two are clear (additional supportive differences in the perceptions of pupils are presented in Part II of this final report), and most people reading these notes would predict that they might find differences in the effectiveness of these two teachers.

But before our readers jump too fast to the conclusion that a sociolinguistic analysis of a few lessons can result in remarkably accurate predictions of teacher effectiveness, we hasten to note that Teacher E was not the one who drew the most criticism in the sociolinguistic analysis. Teachers A and C shared that honor.

Shuy has commented on Teacher C as follows:

1) she has "no language arts content at all;"

2) she sets the ground rules for the lesson, "but not with clarity;"

3) she shows "very weak topic shifting," because of her lack of clarity; and

4) she displays "an as yet undeveloped ability to do 'teacher talk' effectively.'

Given all these problems, we might expect that she also would be a less effective teacher. However, our regression analysis shows that, while she is less effective in final reading achievement than Teacher F, she is no less effective than her third grade counterparts, Teachers B and D. It is only fair to note, though, that the lack of clarity which Shuy comments on is revealed in the perceptions of her pupils. Pupils in her class are significantly different from those in other classrooms in that they are largely unable to explain the functions (purpose) of either teacher questions or teacher praise in their classroom. (These data are reported and discussed more fully in Part II of this final report.) Thus, while Shuy's perceptions are not corroborated by reading achievement tests, they

FIGURE 10

A Sociolinguist's Contrasting
of Two Fourth Grade Teachers

Teacher E	Teacher F
1. placement in the "form of doing content" circle	1. placement in the "do content" circle
2. one of the "best examples of the special language of classroom teacherese"	2. the most "natural" use of language of all six teachers
3. "iron-fisted control of the topic;" she is "always in control, inching forward slowly, never fully revealing the right answers"	3. "adept at topic branching;" a main feature is "the fluidity of her lessons;" she is "attentive to the need for topics to flow smoothly from one another"
4. she illustrates a technique of "management by withholding information"	4. she "is personal (adding her own experience to the conversation)"

are corroborated by the perceptions of pupils in Teacher C's classroom.

For Teacher A we find no corroboration of Shuy's analysis anywhere. Shuy tells us that:

1) She has "no language arts content" in her lessons:

2) Her students are so insecure about what a "safe topic" is, that they "recycle old, safe topics;"

3) She exhibits a "deadly slow pace" and a "deadening monotone;" and

4) Her "language goes beyond teacher talk to a ritualized stereotype of it."

The reader will be surprised to learn that a regression analysis showed that pupils of Teacher A were significantly higher in final reading achievement (entering reading controlled for) than any other teacher, except Teacher F. Because Teacher A was the only second grade teacher in this study, and because there is a strong and long-term pattern of reading achievement in this school such that first and second grade scores are level with national norms, while third, fourth and fifth grade scores drop progressively below national norms, we do not feel it is appropriate to assert that Teacher A is actually more effective than the other teachers, but clearly we can not say that she is less effective. In addition to this, the pupils in her class display no significant differences from other pupils in perceptions of classroom discourse, except for differences that are clearly associated with grade level (i.e., show consistent patterns across second, third, and fourth grades). This holds both for the data reported here and for the additional data on perceptions of questions, responses, and praise reported in Part II of this final report.

On the basis of these comparisons, then, we must conclude again that the use of a combination of perspectives provides us with the most complete and valid picture of classroom discourse. Where the various perspectives support each other, we gain confidence in the accuracy of the picture being painted. Where they contradict each other, we are warned that we must look further before accepting any one view as correct.

Conclusion

In conclusion, it is important to note again that this was a descriptive study, and that it presents findings from only six classrooms in a single school. While these findings are not generalizable on the basis of this study alone, they do support and extend one of the most basic concepts of sociolinguists-that the social context is the most important factor in determining participants' behavior, and, we now add, participants' perceptions. In addition, we believe that the method of "triangulation" (Adelman & Walker, 1975), which has been used in these analyses, has been demonstrated to be an extremely valuable tool in contributing to our understanding of classroom discourse. We are certain that it can be used to good advantage in future studies, and we recommend it highly to our colleagues in the field of research on teaching.

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APPENDICES

I. Data Collection Tasks for Units and Salient Features

A. Units of Language Task

(Ask after each of three videotape segments.) What do you remember anybody saying in that part of the lesson (family conversation; play session)?

What else do you remember that anybody said in that part of the lesson (family conversation, play session)?

B. Salient Features Task

(Lay out all 3 x 5 cards in random order.) These are all things that you heard people saying in the lesson. Some of these things are like each other in some ways. Can you find some cards that you think belong together because people were saying the same kinds of things? (If child seems hesitant, say: There aren't any right or wrong answers. I'm just interested in what you think.)

When a group has been formed, say: Good. Now what was your idea here?

Why did you put these together? (Mark cards selected and write down reason given.)

Are there any other cards here that might belong with this group? (Replace selected cards in random layout.)

O.K. Let's look at the cards again. Can vou find some other things that people said that seem to be like each other somehow? (continue)

II. Data Collection Task for Peer Status

A. Procedures for Administering Status Perception Instrument

1. Children will be interviewed individually.
   When children enter Language Lab they should sit with an interviewer familiar to them.

2. To introduce SPI tell child we want to learn more about their class and will be asking some questions they will answer by choosing people from the picture board. Show the child the picture board. Ask if the pictures are from their class. Have the child find his/her picture and point to it.

3. Ask questions in the order they appear on the forms. Have the children point to pictures as they answer. Use the exact wording. If child gives a name, check it with the back of picture. Write down both first and last name in space provided. Record in the order given.

B. Questions Asked of Pupils

1. Suppose there is going to be a sports contest between your class and Mrs. _____'s class.

   abc Which three people would you choose to make sure your class would win?

   def Which three people would have to work hardest in order to be on the team?

2. Suppose your class got a chance to be on a TV Quiz Show playing against _____ grade from another school. Your class has to send a team of three people and they will be asked questions about things learned in school.

   abc Which three people would you choose to be your class team in order for your class to win?

   def Which three people would have to study hardest if they wanted to make the team?

3. Suppose your teacher had to leave the classroom.

   abc Who would she most likely leave in charge? (If absent, who? Repeat).

   def Who would she least likely leave in charge? Who else? Who else?

4. Suppose an accident happened in your class and no grown-up was around?

   abc Which person would most likely take charge and know what to do? (If absent, who? Repeat).

   def Which person would be least likely to take charge and know what to do in an emergency?

5. Suppose your teacher had an important message to send to the office.

   abc Who would she most likely choose to take the message? (If absent, who? Repeat).

   def Who would the teacher least likely choose to take the message? Who else? Who else?

6. Suppose my job was to follow you around for a week and make a list of the people in your class you were hanging around with.

   abc Who would most likely be at the top of the list. Who next? Who next?

   def Who would least likely be on the list? Who else? Who else?

7. Suppose a photographer came around and he wanted the photograph of some kids on the cover of a book for children. The photographer doesn't know any of the kids. He just walks around for a while. He opens the door of your class, pokes his head in, and looks at the children in the class for just a minute and then closes the door. If we had to decide right then,

   abc Who would he most likely chose to photograph for the book cover? Who else? Who else?

   def Who would he least likely choose to photograph for the book cover? Who else?

III. Category System for Units of Language

A. Event

A report of a nonverbal event or a verbal event in which none of the actual language used is reported (indicated by brackets on 3 x 5 cards); examples include:

1. [One girl raised up her hand.]
2. [She grabbed her stick and started pointing.]
3. [Juel was asking Dawn her spelling words.]
4. [They were mostly talking Spanish.]
5. [He starts clapping.]
6. [Raymond and Gavino were building the Empire State Building.]

B. Fragment

A report of a single word or brief phrase that was actually stated as part of a longer utterance (indicated by dots on 3 x 5 cards); examples include:

1. ... games...
2. ... a little boy ...
3. ... together ...
4. Es ...
5. ... rabbit ears ...

C. Simple Unit

A report of a verbal event given in a form that closely approximates the actual utterance, but provides no information beyond the utterance; examples include:

1. How many would like me to put another word up?
2. Would you like to come up and make compound words for me?
3. Before you come up, think of a word.
4. Cowboy.
5. I know how to spell language.
6. None of your beeswax.

D. Compound Unit

A report of a verbal event given in a form that closely approximates the actual utterance, and provides <u>one</u> additional piece of information, such as, who said it, who it was said to, what was said in response, or what nonverbal event preceeded or followed it; examples include:

1. James, when did you figure out what I was looking for?
2. You'll need your crayons and your pencils for the piece of blank paper. (Miss La Flam)
3. [Miss La Flam rang the bell.] Now to do your assignment, you have to write the sentences. There is 14 lines.
4. I'm purple.
   No, I'm purple.
5. I'm making Superman. (Raymond)
6. [Gavino had a stick in his hand.] En garde!

E. Complex Unit

A report of a verbal event given in a form that closely approximates the actual utterance, and provides two or more additional pieces of information, such as, who said it to whom, who said it and what was said in reply, who said it and what nonverbal event preceeded or followed it; examples include:

1. Does fishhook make a word?
   No. (Rene)
2. Cheryl, what would you say tomorrow if we asked you what a compound word was?
   Two little words put together to make a big one.
3. Let's draw a witch. How can you describe a witch?
   [She called on Rick.]
   Scary.
   I don't know how to draw scary, so I'll just write it up on the board.
4. Sit down. (Mother to Baby)
5. I know how to spell language. (Connie)
   [She told her Mom.]
   Good. (Mom)
6. I'm gonna tell your mom, Amy. (Raymond)
   You don't even know my mom's name. (Amy)
   Your mom's name's Karen. (Raymond)
   Huh uh. 'Cause that's my sister's name, and if her name was the same as my mom's, then Karen would be named after my mom. (Amy)

IV. Category System for Salient Features of Language

A. Elemental

The reason given for forming a group focuses on identical letters, words, or phrases; examples follow.

1. Instances selected:

   a. Something to do.
   b. Something we were doing Friday.
   c. How did you remember it?

   Reason for grouping: They all have "d's".

2. Instances selected:

   a. I think this is how you spell wart.
   b. [They all shouted "Wart".]

   Reason for grouping: Because they have "wart".

3. Instances selected:

   a. Billy, come on up.
   b. Gavino, come on up.

   Reason for grouping: They look the same. (He points to "come on up.")

B. Structural

The reason given for forming a group focuses on features emphasized by the linguistic structure of English, such as, relationship of topic (subject) or action (verb), or capacity for sentence expansion; examples follow.

1. Instances selected:

   a. Can you help me play a game?
   b. ... game ...

   Reason for grouping: Because they're both talking about a game.

2. Instances selected:

   a. [- when they were building that block thing.] Amy, I'm gonna knock your building. (Raymond)
   b. [Bobby wrecked mine and Raymond's building.] I'm gonna murder you. (I said)

   Reason for grouping: Because they wrecked down things in both of these.

3. Instances selected:

   a. Open your eyes and tell us what you've seen in your mind.
   b. Close your eyes and think of something red.

   Reason for grouping: They're just the opposite.

4. Instances selected:

   a. [They pronounce things differently.]
   b. [They were speaking Spanish.]

   Reason for grouping: These tell why you can't make out what they're saying.

5. Instances selected:

   a. ... Martian ...
   b. ... bunny ...

   Reason for grouping: They're both living things, but not humans.

6. Instances selected:

   a. [Amy said not to break down her...]
   b. Superman.

   Reason for grouping: You can say them all together, like a sentence.

C. Contextual

The reason given for forming a group includes reference to a segment of activity that occurred on the videotape, or to the central concept taught in a lesson; examples follow.

1. Instances selected:

   a. How many know what I'm looking for?
      [Everybody raised up their hands.]
   b. How many people want another one if you didn't get it?
   c. This is going to be a "yes".

   Reason for grouping: First she asked how many know what I'm looking for, and then she asked how many want one, and then she said this is going to be a yes.
   (sequence of "action")

2. Instances selected:

   a. Bill. Let's see what Bill can make.
   b. Gavino, come up and let's see what he can make.
   c. Robert make "mousetrap", and that's a fun game, too.

   Reason for grouping: Those people went up to make some words (on the felt board).

3. Instances selected:

   a. What is a mental picture?
      [Ysa raises her hand.]
      A picture that you see in your head.
   b. What did you see in your mental picture?

   Reason for grouping: She's telling them about describing.
   (lesson concept)

4. Instances selected:

   a. Doorbell
   b. Airplane
   c. Sidewalk
   d. Bedroom
   e. Fishhook
   f. Cowboy
   g. Milkman
   h. Fireman

   Reason for grouping: They all have two words. (Compound words - lesson concept)

5. Instances selected:

   a. Miss La Flam tore him up.
   b. No. Miss La Flam didn't tear him up. She just said maybe we can tape it.

Reason for grouping: Connie's telling about Miss La Flam and Eli. (Connie's "story" segment)

6. Instances selected:

a. Please don't fall down. I'm begging you. (Raymond - to building)
b. Let's make a fence around it. (Gavino)
c. I'm almost finished, Amy. (Ysa)
We are finished. (Raymond)

Reason for grouping: They're all about the building they were making.

D. Functional

The reason given for forming a group focuses on the type of comments being made, such as questions, answers, or directions; examples follow.

1. Instances selected:

a. What if I was a person from another planet and I didn't know what a witch looked like. Could you describe it for me?
b. Let's draw a witch. How can you describe a witch?
[She called on Ricky.]
Scary.
I don't know how to draw scary, so I'll just write it on the board.

Reason for grouping: She was asking them how to describe a witch.

2. Instances selected:

a. Let's draw a witch. How can you describe a witch?
[She called on Ricky.]
Scary.
I don't know how to draw scary, so I'll just write it on the board.
b. A pointed hat.
A pet cat?
No.
A pointed cat?
No.
A pointed hat.

Reason for grouping: They were telling her how to draw it (the witch), like what to put on it.

3. Instances selected:

a. Sit down.
b. Don't bring any friends in and don't fight.
c. Did you clean your rooms?

Reason for grouping: The mother was telling them to do something.

E. Social

The reason given for forming a group focuses on the person involved, such as the source of the comments or the referent of the comments, or refers to an interchange between two people; examples follow.

1. Instances selected:

   a. The reason why these blank piece of paper is in front of you is so if you can't say it out real good, then just draw a picture of it. (Miss La Flam)
   b. You'll need your crayons and pencils for the piece of blank paper. (Miss La Flam)
   c. The kids can come up and be the teacher after I do three things. (Miss La Flam)
   d. Imagine that you're walking and then you see a monster. Open your eyes. (Miss La Flam)
   e. When I was doing that, I seen a stream of red blood running.
   f. How many people want me to do one more? Hands down. It was about half and half.

   Reason for grouping: Miss La Flam's talking to the whole class.

2. Instances selected:

   a. Do you know what a mental picture is? [She asked Ysa.] A mental picture is something that you think in your head. (Ysa)
   b. There was a Jawa chasing after me. (Ysa)

   Reason for grouping: Ysa's talking. It's about the stuff that she seen in her head.

3. Instances selected:

   a. Get ready for school. (Mother)
   b. I have to work all day. (Mother)

   Reason for grouping: Because her mother was talking - and she sounded like she was mad.

4. Instances selected:

   a. We'll be right back with football after these messages.
   b. The football is going down on the 40-yard line.

   Reason for grouping: Both are from the T.V. (television was playing in background during the family conversation).

5. Instances selected:

   a. [Summer was playing with the baby and tickling it.]
   b. Goo-goo-gah.

   Reason for grouping: This is what a baby does when you tickle him.

6. Instances selected:

a. It doesn't look very tall. (Amy)
b. So what. We ran out of blocks. (Raymond)

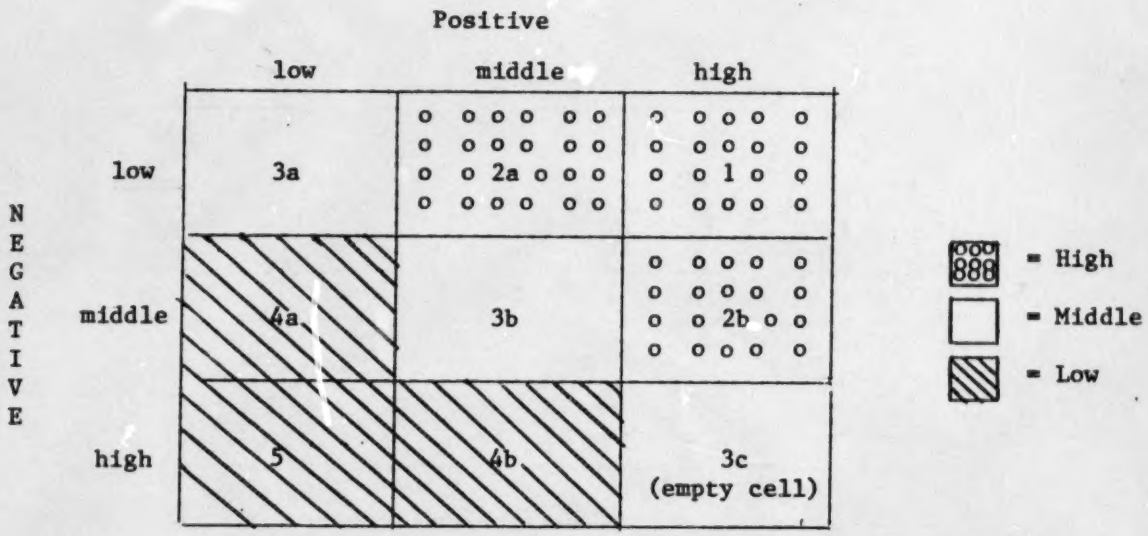
Reason for grouping: Raymond was answering - telling Amy about the Empire State Building.

V. Notes on Data Analysis Procedures

A. Procedures for Deriving SPI Categories

For PST 1, each routine choice is given a value of "1". Positive choices for each child are summed to give a total positive score. The mean within each class is computed. All scores larger than one standard deviation above the mean within a given class are designated as "high". All scores smaller than one standard deviation below the mean for that class are designated "middle". All other scores for that class are designated "middle".

Identical procedures are followed with negative choices for PST 1. Each child then has a positive designation and negative designation and could be placed on a matrix of positive/negative designations:



The final designation of PST 1, the one used for analyses, is formed as follows:

All pupils in cells 1, 2a, and 2b = High Status
All pupils in cells 3a and 3b = Middle Status
All pupils in cells 4a, 4b and 5 = Low Status

For this study identical procedures are used with PST 2. (No pupils ended up in cell 3c in any classroom).

Numerical Score - The following steps were followed for each child:

Steps	Example
1. The child's total positive and total negative scores were found.	Pos: 9 Neg: 6
2. The two scores were summed	15
3. The sum was divided by the number of other children in that class times the number of scenarios involved. Because the numerator gives total times mentioned by other children and the denominator equals total number of choices possible, the result represents an "attention weighting" for that child.	$\frac{15}{(17 \times 4)} = .221$
4. Total negative choices were subtracted from total positive choices (keeping the sign).	9-6 = +3
5. Result of Step 4 was mutiplied by attention weight (Step 3).	3x.221 = .663